Appendix VIII:
RCA Wetland Delineation Report

MORRISON MAIERLE, INC.
An Employee-Owned Company

RAVALLI COUNTY AIRPORT
WETLAND DELINEATION REPORT

February 2005

Prepared For

Ravalli County Commissioners
215 South 4th Street, Suite C
Hamilton, Montana 59840

Prepared By

Morrison-Maierle, Inc., Environmental Services Group
901 Technology Boulevard
Bozeman, Montana 59718

TABLE OF CONTENTS

TABLES

FIGURES

EXHIBIT

APPENDICES

EXECUTIVE SUMMARY

At the request of Ravalli County Commissioners, an investigation area within and adjacent to the Ravalli County Airport property, from Golf Course Road to approximately 1,200 feet north of Stock Farm Road, was examined for the presence and extent of wetlands and waterways by Morrison-Maierle, Inc. (MMI) in September 2003 and October of 2004. This wetland delineation has been completed to address potential impacts to wetlands that could occur as a result of expansion of the existing airport facilities.

The Ravalli County Airport is located in portions of Sections 20, 29, and 32, Township 6 North, Range 20 West, Ravalli County, Montana approximately 1 mile east of Hamilton, Montana. The investigation area comprises 1) an approximately 1,800-foot-wide corridor extending from the Golf Course Road north to Tammany Lane, 2) an approximate 1,000-foot-wide corridor east of the existing runway, 3) the airport property west and adjacent to the existing airport structures, 4) the gun range and gravel pit, and 5) an approximately 1,320-foot-wide by 4,320-foot-long area north of the existing runway that extends approximately 1,200 feet north of Stock Farm Road. The preferred construction alternative for the airport expansion identified in the Ravalli County Airport Layout Plan includes construction of a proposed new runway approximately 400 feet to the east of the existing runway, and it is anticipated that all impacts from runway construction will occur within the investigation area (MMI 2003). Therefore, all wetlands and waterways occurring within the investigation area were delineated.

Two separate delineations occurred within the investigation area. The 2003 delineation effort identified fourteen wetlands, but did not examine the entire proposed project impact area identified in the Ravalli County Airport Layout Plan. The purpose of the 2004 delineation was to extend the boundaries of wetlands previously delineated in 2003 to the project impact area boundary and to delineate any wetlands that occur within the investigation area that were not identified in 2003. Six wetland boundaries were extended in 2004 from the previous delineation to the project impact boundary, and four additional wetlands were delineated in 2004. The wetlands that were delineated during both field efforts are identified in Exhibit A.

A total of eighteen wetlands were identified within the Ravalli County Airport investigation area. Utilizing the Hydrogeomorphic Classification System, nine of the wetlands were classified as riverine and nine wetlands were classified as depressional. Two of the nine depressional wetlands appear to be non-jurisdictional. These two wetlands did not connect nor were they adjacent to a known waters of the U.S. All but one of the riverine wetlands delineated appeared to be jurisdictional. Final jurisdictional status and verification of delineated wetland boundaries for all wetlands located within the project area will be provided by the U.S. Army Corps of Engineers. Approximately 45.97 acres of wetland occurs within the investigation area.

1.0 INTRODUCTION

At the request of Ravalli County Commissioners, an investigation area within and adjacent to the Ravalli County Airport property, from Golf Course Road to approximately 1,200 feet north of Stock Farm Road, was examined for the presence and extent of wetlands and waterways by Morrison-Maierle, Inc. (MMI) in September 2003 and October of 2004. The Ravalli County Airport is located in portions of Sections 20, 29, and 32, Township 6 North, Range 20 West, Ravalli County, Montana approximately 1 mile east of Hamilton, Montana. The investigation area comprises 1) an approximately 1,800-foot-wide corridor extending from Golf Course Road north to Tammany Lane, 2) an approximate 1,000-foot-wide corridor east of the existing runway, 3) the airport property west and adjacent to the existing airport structures, 4) the gun range and gravel pit, and 5) an approximately 1,320-foot-wide by 4,320-foot-long area north of the existing runway that extends approximately 1,200 feet north of Stock Farm Road. The site location and specific area of investigation are provided in Figure 1.

Construction of a new runway parallel and approximately 400 feet to the east of the existing runway is the preferred alternative for the proposed airport expansion identified in the Ravalli County Airport Layout Plan (MMI 2003). This proposed alternative would convert the existing runway into the parallel taxiway and a new 75-foot-wide runway would be constructed. The newly proposed runway would be constructed in an area that is currently undeveloped pasture used for grazing, and it is anticipated that all impacts from runway construction will occur within the investigation area. Therefore, all wetlands and waterways occurring within the proposed project development corridor were delineated. The property adjacent to the airport is low-density residential and cultivated agriculture fields. The areas identified by MMI that were determined to exhibit positive indicators for hydrophytic vegetation, wetland hydrology, and hydric soils were delineated as wetland and are described in detail in the following sections.

Two separate delineations occurred within the investigation area. The 2003 delineation effort identified fourteen wetlands, but did not examine the entire proposed project impact area identified in the Ravalli County Airport Layout Plan. The purpose of the 2004 delineation was to extend the boundaries of wetlands previously delineated in 2003 to the project impact area boundary and to delineate any wetlands that occur within the investigation area that were not identified in 2003. Six wetland boundaries were extended in 2004 from the previous delineation to the project impact boundary, and four additional wetlands were delineated in 2004. The wetlands that were delineated during both field efforts are identified in Exhibit A.

2.0 OBJECTIVES

The purpose of this study was to locate areas that meet the criteria for wetlands and non-wetland waterways within the specified investigation area within and adjacent to the Ravalli County Airport property, delineate their boundaries, and provide the results in a final report. A second objective was to provide observations as to the likely jurisdictional status of the delineated wetlands and non-wetland waterways based on their connection or adjacency to a known waters of the U.S.

The jurisdictional observations made during the course of the delineation effort are considered preliminary and are based on conditions observed in the field and/or during the off-site review, as well as interpretation of current guidelines. Final jurisdictional status will require concurrence from the U.S. Army Corps of Engineers (USACE). Jurisdictional determination criteria are discussed in more detail in Section 3.2.3.

3.0 METHODS

The wetland delineation for this project was based on the methodology developed by the USACE and other federal agencies, for implementation of Section 404 of the Clean Water Act. The investigation consisted of an off-site review of existing site-specific information and completion of an on-site inspection using the Routine Level 2 Determination Method outlined in the *1987 USACE Wetlands Delineation Manual* (Environmental Laboratory 1987).

3.1 OFF-SITE REVIEW

A preliminary off-site review was completed to identify potential wetland areas and non-wetland waterways within the project corridor. The source documents used for this review included the U.S. Geological Survey (USGS) Mountain House (1964), Hamilton North (1967), Hamilton South (1964), and Corvallis (1967) 7.5' Topographic Maps, the applicable portion of these maps are provided as Figure 1; the aerial photograph of the project corridor (MMI 1999), provided as Figure 2; the Ravalli County Soil Survey Map (USDA 1959), provided as Figure 3; and the National Wetlands Inventory (NWI) Map, provided as Figure 4.

3.2 ON-SITE REVIEW

Wetlands were identified on-site (using the Level 2 Routine Wetland Determination Method) as areas that met the standard criteria for hydrophytic vegetation, hydric soils, and wetland hydrology. The wetland criteria for each of the above three parameters is discussed in greater detail in Section 3.2.1. Using this method, these three parameters were evaluated at sample points (S) along linear transects to determine the boundary between upland and wetland areas. If a sample point exhibited positive wetland indicators for all three parameters, a positive wetland determination is made for the area represented by the sample point. If any sample point failed to exhibit a positive indicator for one or more parameters, the area is determined to be non-wetland per the 1987 USACE Wetland Delineation Manual. The areas that were determined to be wetland (W) that occurred within the project corridor were marked with pin flags, surveyed, and mapped. The locations of all delineated wetlands are provided on the Wetland Delineation Map included as Exhibit A. Two separate delineations occurred within the investigation area. The 2003 delineation effort identified fourteen wetlands, but did not examine the entire proposed project impact area identified in the Ravalli County Airport Layout Plan. These wetlands delineated in 2003 are identified on Exhibit A and in this report as "03" wetlands. The purpose of the 2004 delineation was to extend the boundaries of wetlands previously delineated in 2003 to the project impact area boundary and to delineate any wetlands that occur within the investigation area that were not identified in 2003. Six wetland boundaries were extended in 2004 from the previous delineation to the project impact boundary, and four addition wetlands were delineated in 2004. These wetlands are labeled as "04" wetlands. Many of the wetland boundaries extended beyond the project corridor. Where wetlands extended beyond the investigation area, an arrow has been provided on the Wetland Delineation Map, showing the location and the direction in which the wetland continues.

3.2.1 Hydrophytic Vegetation, Hydric Soils, and Wetland Hydrology

The following is a discussion of the wetland indicators for each of the three parameters (vegetation, soils, and hydrology) examined in the field when utilizing the Level 2 Routine Wetland Determination Method. Under most circumstances, a positive wetland indicator must be identified for each of the three parameters in order for an area to be determined to be wetland.

Hydrophytic Vegetation

Plants must be physiologically or morphologically adapted for life under saturated or anaerobic soil conditions to grow in wetlands. The USACE and the U.S. Fish and Wildlife Service (USFWS) have determined the estimated probability of each plant species occurrence in wetlands and have assigned an "indicator" status to each species to reflect their findings. Accordingly, plants may be categorized as obligate (OBL), facultative wetland (FACW), facultative (FAC), facultative upland (FACU), upland (UPL), and no indicator assigned (NI). Species with an indicator status of OBL, FACW, or FAC are considered adapted for life in saturated or anaerobic soil conditions. A sample plot is considered to meet the hydrophytic vegetation criterion if more than 50 percent of dominant species present have an indicator status of OBL, FACW, or FAC.

Hydric Soils

Hydric soils are defined as soils that are saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions in the upper part of the soil profile (Environmental Laboratory 1987). Soil is saturated when all voids (pores) between soil particles are filled with water.

Hydric soils exhibit certain physical characteristics that can be observed in the field. These characteristics, or indicators, include high organic content, accumulation of sulfides, greenish or bluish gray color (gley formation), mottling, and dark soil colors (low soil chroma). Organic content is estimated visually and texturally, sulfidic material is determined by the odor of sulfide gases, and soil colors are determined by using *Munsell Soil Color Charts* (Munsell Color 2000). A sample plot is considered to meet the hydric soil criterion if one or more of the above indicators or other hydric soil indicators as specified in the 1987 USACE Wetlands Delineation Manual are present.

Wetland Hydrology

The technical guidelines for the wetland hydrology parameter have been established as soils that are periodically inundated or saturated to the surface at some time during the growing season (Environmental Laboratory 1987). Wetland hydrology may be supplied by surface water, groundwater, and/or direct precipitation. Sites are examined for visual indicators of wetland hydrology such as current ponding or soil saturation, previous inundation or saturation, and observable drainage patterns. A sample plot is considered to meet the wetland hydrology criterion if at least one primary indicator or two secondary indicators are present.

3.2.2 Non-Wetland Waterways

Non-wetland waterways are identified as having either perennial or intermittent flow as evidenced by the presence of a defined channel with bed and bank or a streambed dominated by hydrophytic vegetation. These non-wetland waterways may be considered isolated or jurisdictional depending on adjacency to or the existence of a surface hydrologic connection to a known waters of the U.S.

3.2.3 Jurisdictional Determination

The observed jurisdictional status of wetlands and non-wetland waterways was determined through visual documentation of a surface hydrological connection to a known waters of the U.S. Final jurisdictional status for all wetlands and waterways located within the project area will be provided by the USACE.

3.2.4 Data Collection

Vegetation, soils, and hydrology were documented at representative locations along the wetland-upland boundary. Data were recorded for at least one sample point on both the upland and wetland sides of the wetland boundary along a linear transect. Copies of USACE data sheets are provided in Appendix A. Sample points were documented and representative photographs of the project area were taken. The following is the sampling, data collection, and data recording methodology for each of the three wetland parameters (vegetation, soils, and hydrology) as well as for sample point documentation.

Vegetation Data

At each sample point, plant species dominance was estimated based on the percent areal or basal coverage within a 30-foot radius for the tree and shrub layers and a 10-foot radius for the herbaceous layer within the community type being sampled. Plants were identified using standard regional plant keys. Taxonomy was based on *Vascular Plants of Montana* (Dorn 1984). Indicator status of plant species was taken from the *National List of Plant Species That Occur in Wetlands for Region 9-Northwest* (Resource Management Group 1993) and the *1993 Supplement to the List of Plant Species that Occur in Wetlands: Northwest (Region 9)* (Reed 1993).

Soil Data

At each sample point soils were characterized to a minimum depth of 16 inches when possible. At times, excessively rocky soils may prevent this depth of excavation. Munsell Soil Color Charts and standard soil texturing methodology were used to describe the soil profile.

Hydrology Data

At each sample point, hydrology was typically determined based on factors such as depth to free water in soil test pits, inundation, soil saturation in the upper 12 inches, or observable drainage patterns within the wetland.

Photo and Sample Data Point Documentation

Sample points were marked in the field with pin flags. Each sample point was then assigned a number that corresponded to the wetland being documented, and this number was written on the sample point flags. Sample points were then surveyed. Representative photographs of the wetland and associated upland areas were taken with the location and a description of the scene recorded on a field photo log sheet. Copies of digital photographs are provided in Appendix B.

3.3 WETLAND CLASSIFICATION

Wetlands were classified using the Hydrogeomorphic (HGM) classification system. This system classifies Montana wetlands as riverine, slope, depressional, mud flats, or lacustrine (Smith 1995). A brief description of each wetland type is presented below.

- **Riverine** wetlands include wetlands associated with waterway/drainage systems. These can be perennial or intermittent streams or rivers and/or their immediately adjacent wetlands.

- **Slope** wetlands include wetlands that are typically associated with groundwater seepage. This seepage usually persists and saturates the soil throughout the growing season but typically does not form a defined channel. Seepage slopes may convey water to a waters of the U.S. and therefore, would be considered jurisdictional. However, water in these wetlands may influence only a limited area and are often isolated and therefore, would be considered non-jurisdictional.

- **Depressional** wetlands include wetlands that typically form in isolated depressions such as glacial potholes. Hydrology for these wetlands may either be supplied by groundwater seepage or surface water from the surrounding watershed. Typically, these wetlands have no definable inlet or outlet.

- **Mud flats** include both mineral flats such as playas and organic flats such as expansive peat lands.

- **Lacustrine** wetlands include both wetlands immediately adjacent to large water bodies as well as the water body itself. In order to qualify as a lacustrine wetland, the water body must exceed 2 meters in depth, or the wetland is classified as depressional.

3.4 PERENNIAL DRAINAGES

Perennial drainages, or streams, flow continuously and they are generally fed in part by springs. Surface water elevations are commonly lower than the water table elevation in adjacent soils (Hansen et al. 1995). Existing data, such as USGS topographic maps and Natural Resource Conservation Service (NRCS) soil survey maps, were reviewed to identify documented perennial drainages.

4.0 RESULTS

The wetland delineation completed by MMI consisted of reviewing existing site-specific information and completing an on-site inspection with sampling using the Level 2 Routine Determination Method outlined in the 1987 USACE Wetlands Delineation Manual. The delineation effort consisted of a preliminary off-site investigation of available information and an on-site investigation that consisted of two separate pedestrian surveys of the investigation area and delineation of individual wetlands and waterways. A total of eighteen wetlands were identified within the Ravalli County Airport project area.

4.1 OFF-SITE REVIEW

A preliminary off-site review was completed of the USGS Mountain House, Hamilton North, Hamilton South, and Corvallis 7.5' Topographic Maps, provided as Figure 1; an aerial photograph of the project site, provided as Figure 2, the Soil Survey of Ravalli County, Montana, provided as Figure 3; and the National Wetlands Inventory Map of the area, provided as Figure 4.

4.1.1 USGS Topographic Map

The Mountain House (1964), Hamilton North (1967), Hamilton South (1964), and Corvallis (1967), Montana USGS 7.5' Topographic Maps show residential areas to the southwest of the Ravalli County Airport with Gird Creek, Hedge Ditch, and one unnamed drainage crossing the airport property within the investigation area. The unnamed western most drainage was delineated as W-1-03 and W-2-03, and continues off the property as W-12-03. This drainage appears to be a lateral of the Hedge Ditch. The northern most drainage is Gird Creek, and its fringe wetland was delineated as W-4-03/W-4-04. The southern most drainage within the investigation area is identified on the topographic map as Hedge Ditch, a lateral of Gird Creek, which was delineated as W-15-04. Other features evident in the topographic map are the airport runway and structures, and the gravel pit near the entrance to the airport at the turn off from the East Side Highway. The topographic maps indicate relatively flat topography throughout the investigation area and the lack of dense vegetation.

4.1.2 Aerial Photograph

The aerial photograph of the project site shows that the majority of the site is open agricultural land with low-density residential areas to the southwest of the Ravalli County Airport property (MMI 1999). Several drainages are evident on the photograph identified by dark linear areas and were delineated as W-1-03/W-1-04, W-2-03, W-3-03, W-4-03/W-4-04, W-8-03/W-8-04, W-11-03, W-12-03, and W-15-04. Other areas with dark shading that appear on the photograph were delineated as depressional wetlands W-5-03, W-6-03/W-6-04, W-7-03/W-7-04, W-9-03, W-10-03, W-13-03, W-16-04, and W-18-04. Dry drainages are visible on the aerial photograph to the east of the existing runway and are depicted by dark linear areas. On-site review concluded that these areas did not contain wetland vegetation or defined bed and bank. Therefore, these drainages were not delineated as wetlands.

4.1.3 Soil Survey Map

According to the Soil Survey of Ravalli County, Montana, four soil map units (representing those areas where sample points were located within delineated wetlands) occur within the investigation area boundary that contain hydric soil components. The map unit Corvallis silt loam, poorly drained variant (C3r), 0 to 2 percent slopes, contains 90 percent of the Corvallis poorly drained variant component, which is a hydric soil. The map unit Corvallis silt loam, slightly saline (C3s), 0 to 2 percent slopes, contains 10 percent of the poorly drained soils component, which is a hydric soil. The map unit Corvallis silt loam, moderately saline (C3t), 0 to 2 percent slopes, contains 5 percent of the poorly drained soils component, which is a hydric soil. The map unit Corvallis silt loam, moderately shallow, slightly saline (C3v), 0 to 2 percent slopes, contains 5 percent of the poorly drained soils component, which is a hydric soil.

The non-hydric soil map units that occur within the investigation area boundary which represent those areas where sample points were located within delineated wetlands include: Burnt Fork loam (B3f), 0 to 2 percent slopes; Granstsdale loam (G2n), 0 to 2 percent slopes; Riverside cobbly sandy loam (Rm), 2 to 5 percent slopes; and Slocum loam (S2k), 0 to 2 percent slopes. Wetlands were delineated in areas designated on the Soil Survey Map of Ravalli County as having both hydric and non-hydric soils. A list of all hydric and non-hydric soil map units located within the proposed project corridor that represent sample point locations are provided in Table 4.1. The NRCS is currently updating soils information for the Bitterroot Valley; soil data for this area may be updated as a result of the new survey.

Table 4.1 Soil map units occurring within the project investigation area at sample points.

Map Unit Symbol	Map Unit Name	Percent Slope
C3r	Corvallis silt loam, poorly drained variant	0 to 2
C3s	Corvallis silt loam, slightly saline	0 to 2
C3t	Corvallis silt loam, moderately saline	0 to 2
C3v	Corvallis silt loam, moderately shallow, slightly saline	0 to 2
B3f	Burnt Fork loam, level	0 to 2
G2n	Grantsdale loam, level	0 to 2
Rm	Riverside cobbly sandy loam, sloping	2 to 5
S2k	Slocum loam, slightly saline	0 to 2

4.1.4 National Wetlands Inventory Map

The NWI Map indicates two wetlands present within project area. The two mapped wetlands are illustrated on Figure 4. A palustrine, emergent, temporarily flooded wetland occurs north and east of the existing runway and is the fringe wetland associated with Gird Creek that was delineated as W-4-03. The other wetland occurring in the project area identified by the NWI Map is a palustrine, emergent, seasonally flooded wetland, diked/impounded wetland. This wetland was delineated as W-13-03.

4.2 ON-SITE REVIEW

A total of eighteen wetland area and waterways were identified and delineated within the investigation area (Exhibit A). Two separate delineation efforts took place, one in September of 2003, and one in October of 2004. The wetland delineation boundaries provided on Exhibit A are labeled to correspond to the date of the field investigation. Several wetland boundaries were extended in 2004 from the mapping of the 2003 delineation. Utilizing the HGM classification system, nine wetlands were classified as riverine and nine were classified as depressional. Descriptions of the wetlands as well as their potential jurisdictional status are provided below.

4.2.1 Riverine Wetlands

Riverine wetlands include waterways or drainage systems along with their immediately adjacent wetlands. Nine riverine wetlands were delineated within the project site including wetlands W-1-03/W-1-04, W-2-03, W-3-03, W-4-03/W-4-04, W-8-03/W-8-04, W-11-04, W-12-03, W-14-03, and W-15-04. One stream, Gird Creek, located approximately 200 feet north of the existing runway along the base of a topographic bench was identified during this review. The riverine fringe wetland and depressional wetland meadow associated with Gird Creek were delineated as W-4-03/W-4-04. Wetland W-1-03/W-1-04 is a typical riverine wetland within the project area that will be described below.

Wetland W-1-03/W-1-04 is located within the southern portion of the investigative area south of Tammany Lane and flows north and connects to W-2-03 across Tammany Lane via culvert. Wetland W-1-03/W-1-04 was observed to be a jurisdictional water of the U.S., due to the existence of a surface hydrologic connection to the Bitterroot River. The dominant wetland vegetation included Nebraska sedge (*Carex nebrascensis*, OBL), common monkey flower (*Mimulus guttatus*, OBL), tufted hairgrass (*Deschampsia cespitosa*, FACW), hairy willowherb (*Epilobium cilliatum*, FACW-), reed canarygrass (*Phalaris arundinacea*, FACW), American mannagrass (*Glyceria grandis*, No status), and curly dock (*Rumex crispus*, FAC+). Hydrology indicators included saturated soils in the upper 12 inches, drainage pattern in the wetland, and the FAC-Neutral Test. The hydric soil was a low chroma color (10YR 2/1). The wetland/upland boundary followed a change in vegetation from Nebraska sedge, common monkey flower, tufted hairgrass, hairy willowherb, reed canarygrass, American mannagrass, and curly dock in the wetland to slender wheatgrass (*Agropyron trachycaulum*, FAC), prickly lettuce (*Lactuca serriola*, FACU), common tansy (*Tanacetum vulgare*, NI), and alfalfa (*Medicago sativa*, No status) in the upland.

4.2.2 Depressional Wetlands

Depressional wetlands include wetlands that typically form in topographic depressions and other low-lying areas. Hydrology for these wetlands may either be supplied by groundwater seepage, surface water from the surrounding watershed, or a combination of the two. Nine wetlands were classified as depressional. Two of the nine depressional wetlands, W-13-03 and W-16-04, appeared to be isolated and are likely to be non-jurisdictional. Seven depressional wetlands, W-5-03, W-6-03/W-6-04, W-7-03/W-7-04, W-9-03, W-10-03/W-10-04, W-17-04, and W-18-04 appeared to connect with W-4-03/W-4-04, the fringe wetland associated with Gird Creek and are likely jurisdictional.

Wetland W-6-03 is a typical depressional wetland within the project area. This wetland is located east of the existing runway area and exhibits a hydrological connection to W-3-03 (a riverine ditch) that eventually connects to W-4-03/W-4-04 the fringe wetland associated with Gird Creek. The dominant wetland vegetation included Nebraska sedge, tufted hairgrass, curly dock, Baltic rush (*Juncus balticus*, FACW+), reed canarygrass, and smooth scouring-rush (*Equisetum laevigatum*, FACW). The hydrology indicators included drainage patterns in the wetland and the FAC-Neutral Test. The hydric soil was a low chroma color (10YR 3/1). The wetland/upland boundary followed a change in vegetation from Nebraska sedge, tufted hairgrass, curly dock, Baltic rush, reed canarygrass, and smooth scouring-rush in the wetland to snowberry (*Symphoricarpos albus*, FACU), Woods rose (*Rosa woodsii*, FACU), and musk thistle (*Carduus nutans*, No status) in the upland.

Table 4.2 provides a list of the delineated wetlands and their wetland type as well as the observed preliminary jurisdictional status. Final jurisdictional status on all wetlands will be provided by the USACE. Wetlands with the same wetland number but with both an "03" and "04" extension were extended during the 2004 delineation field investigation.

Table 4.2 Wetland Information

WETLAND	WETLAND TYPE	OBSERVED PRELIMINARY JURISDICTIONAL STATUS	ACRES
W-1-03/ W-1-04	Riverine	Yes	5.36
W-2-03	Riverine	Yes	6.26
W-3-03	Riverine	Yes	1.38
W-4-03/ W-4-04	Riverine	Yes	18.90
W-5-03	Depressional	Yes	0.05
W-6-03/ W-6-04	Depressional	Yes	0.69
W-7-03/ W-7-04	Depressional	Yes	0.37
W-8-03/ W-8-04	Riverine	Yes	0.36
W-9-03	Depressional	Yes	0.10
W-10-03/ W-10-04	Depressional	Yes	9.37
W-11-03	Riverine	Yes	0.12
W-12-03	Riverine	Yes	1.31
W-13-03	Depressional	No	0.33
W-14-03	Riverine	No	0.13
W15-04	Riverine	Yes	0.83
W-16-04	Depressional	No	0.10
W-17-04	Depressional	Yes	0.07
W-18-04	Depressional	Yes	0.24
		TOTAL ACRES	**45.97**

5.0 REFERENCES

Dorn, Robert D. 1984. Vascular Plants of Montana. Mountain West Publishing. Cheyenne, WY.

Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual. Technical Report Y-87-1, U.S. Army Engineer Waterways Experiment Station. Vicksburg, MS.

Hansen, P.L., R.D. Pfister, K. Boggs, B.J. Cook, J. Joy, and D.K. Hinkley. 1995. Classification and Management of Montana's Riparian and Wetland Sites. Publication 54. Montana Forest and Conservation Experiment Station, School of Forestry. University of Montana. Missoula, MT.

Morrison-Maierle, Inc. (MMI). 1999. Privately flow aerial photograph. Missoula, MT.

Morrison-Maierle, Inc. (MMI). 2003. Ravalli County Airport Layout Plan. Bozeman, MT.

Munsell Color. 2000. Munsell Soil Color Charts. Macbeth Division of Kollmorgan Instruments. New Windsor, NY.

Reed, Porter B., Jr., U.S. Fish and Wildlife Service. 1993. 1993 Supplement to List of Plant Species that Occur in Wetlands: Northwest (Region 9). Supplement to Biological Report 88 (26.9) May 1988.

Resource Management Group, Inc. 1993. National List of Plant Species that Occur in Wetlands Region 9-Northwest. Grand Haven, MI.

Smith, R.D., Ammann, A., Bartoldus, C., and Brinson, M.M. 1995. An approach for assessing wetland functions using hydrogeomorphic classification, reference wetlands, and functional indices. Technical Report WRP-DE-9, U.S. Army Engineer Waterways Experiment Station, Vicksburg, MS.

U.S. Department of Agriculture Natural Resources Conservation Service. Montana Agriculture Experiment Station. 1959. Soil Survey of Ravalli County Area, Montana.

U.S. Geological Survey. 1964. Hamilton South, Montana 7.5' Topographic Map.

U.S. Geological Survey. 1964. Mountain House, Montana 7.5' Topographic Map.

U.S. Geological Survey. 1967. Corvallis, Montana 7.5' Topographic Map.

U.S. Geological Survey. 1967. Hamilton North, Montana 7.5' Topographic Map.

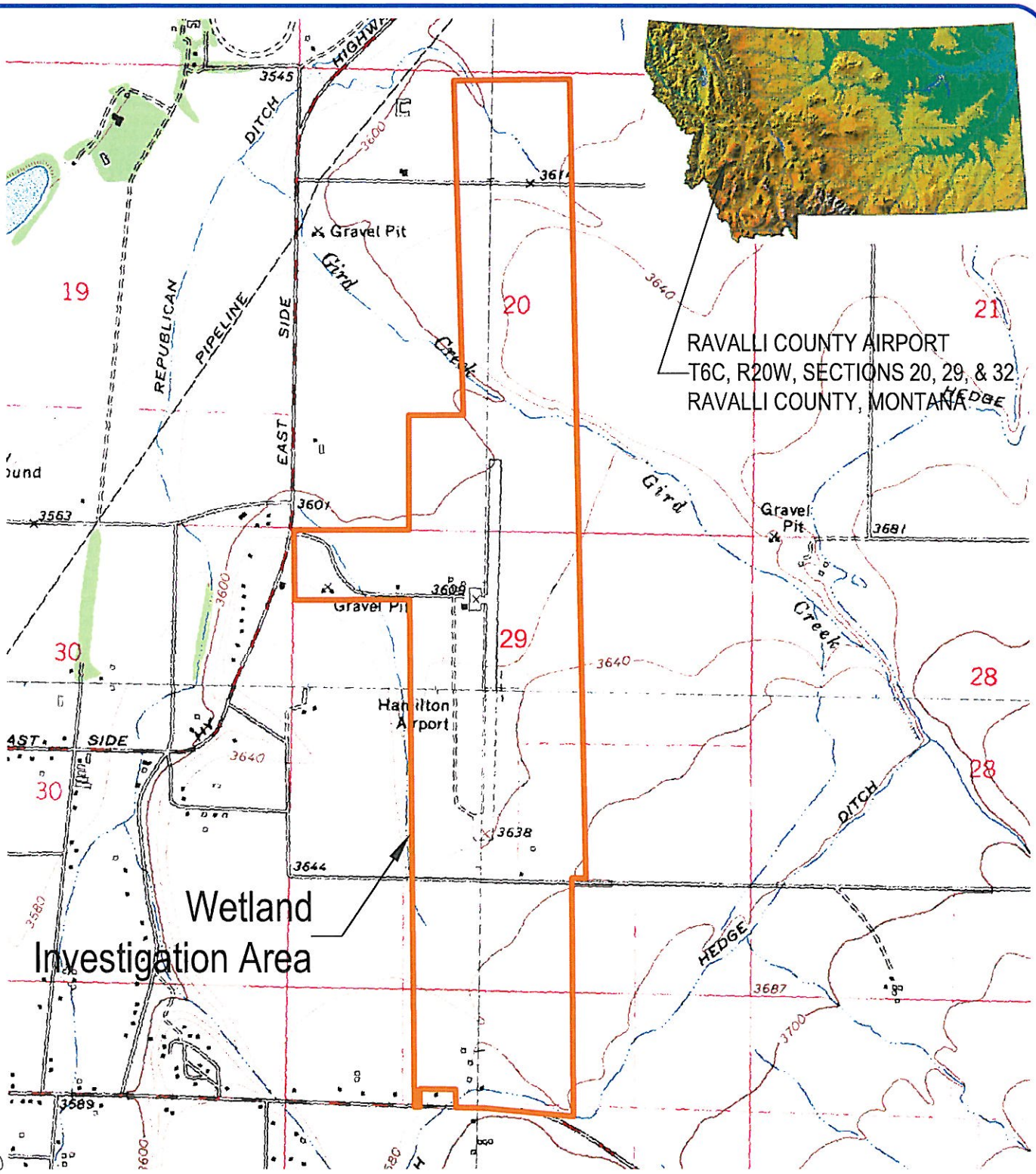


Figure 1

GRAPHIC SCALE
1600 0 800 1600
(IN FEET)
1 inch = 1600 ft.

MORRISON MAIERLE, INC.
An Employee-Owned Company
ENGINEERS SCIENTISTS SURVEYORS PLANNERS SINCE 1945
PO Box 1113, 901 Technology Blvd, Bozeman, MT 59771 - Phone: (406) 587-0721 Fax: (406) 587-1176

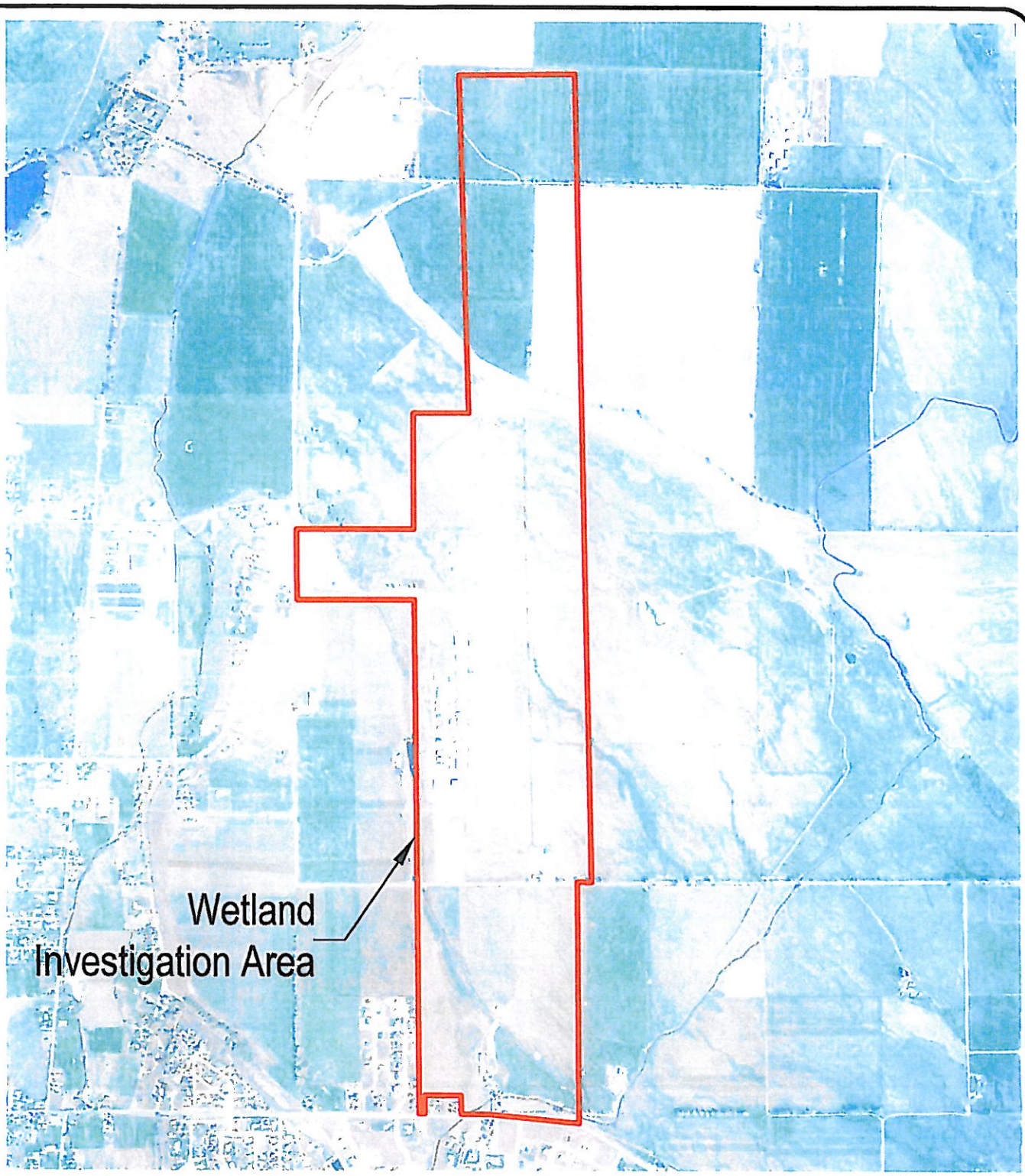
CLIENT:

FIELD WORK:
DRAWN BY: KSS
CHECKED BY: KS

DATE: 4-20-04
SCALE: 1"=1600'
PROJ #.0275.102

RAVALLI CO. AIRPORT TOPOGRAPHIC AND VICINITY MAP

PLOTTED DATE: Oct/14/2008 - 12:10:41 pm
DRAWING NAME: H:\0877\008\Acad\ENVIRONMENTAL\4-EXH.dwg
SHEET 1 OF 1



Aerial Photograph-1999

Figure 2

GRAPHIC SCALE
1200 0 600 1200
(IN FEET)
1 inch = 1200 ft.

MORRISON MAIERLE, INC.
An Employee-Owned Company
ENGINEERS
SCIENTISTS
SURVEYORS
PLANNERS
SINCE 1945
PO Box 1113, 901 Technology Blvd, Bozeman, MT, 59771 • Phone: (406) 587-0721 Fax: (406) 587-1178

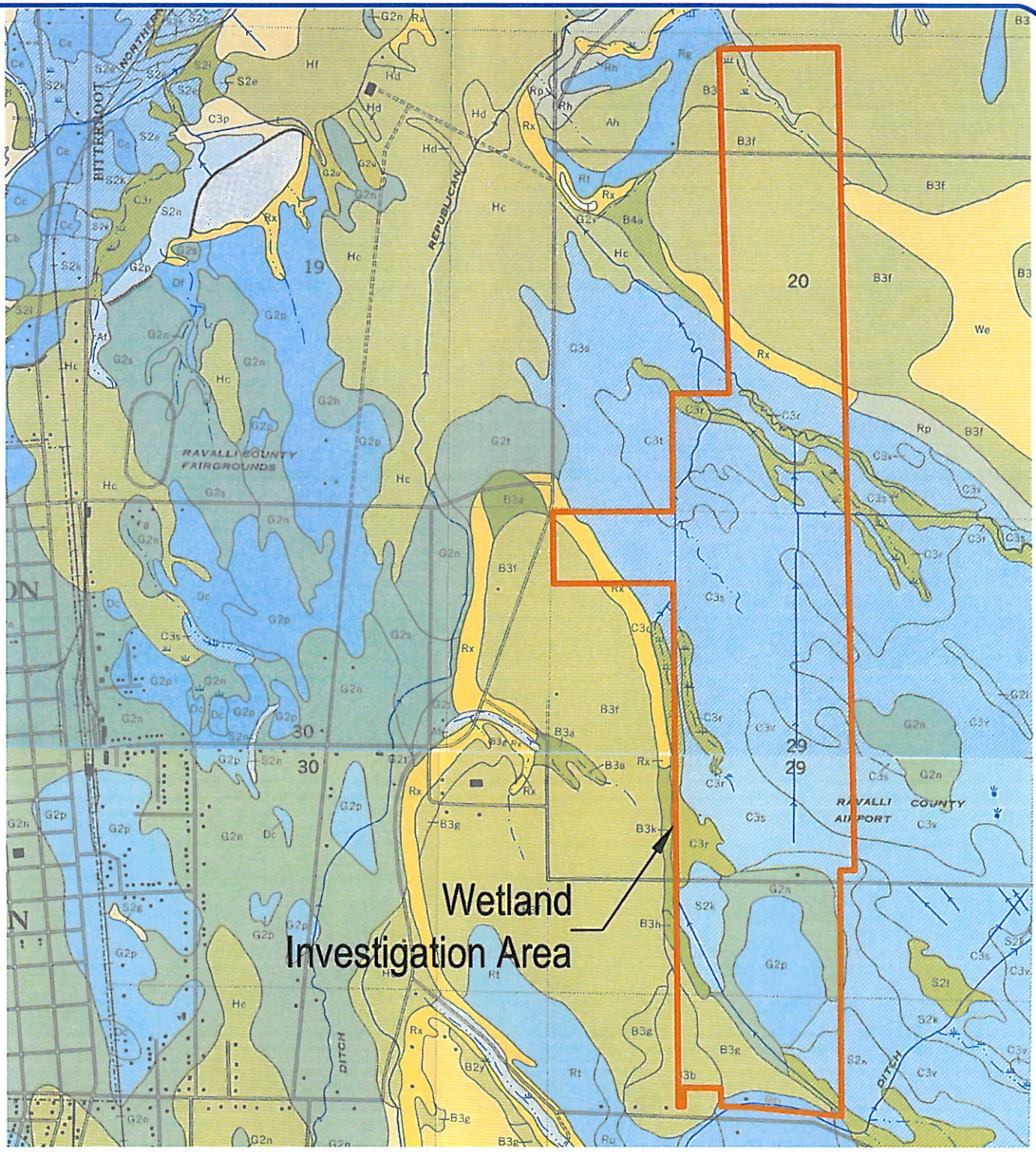
CLIENT:

FIELD WORK:
DRAWN BY: KSS
CHECKED BY: KS

DATE: 4-20-04
SCALE: 1"=1200'
PROJ #: 0275.102

RAVALLI CO. AIRPORT
AERIAL PHOTOGRAPH

PLOTTED DATE: Aug/28/2008 - 12:36:20 pm
DRAWING NAME:
H:\0877\008\Acad\ENVIRONMENTAL\4-EXH.dwg
SHEET 1 OF 1



NOTE:

REFER TO 1959 USDA RAVALLI COUNTY SOIL SURVEY FOR MAP UNIT NAMES AND DESCRIPTIONS.

GRAPHIC SCALE

1600 0 800 1600

(IN FEET)

1 inch = 1600 ft.

Figure 3

MORRISON MAIERLE, INC.
An Employee-Owned Company
ENGINEERS SCIENTISTS SURVEYORS PLANNERS SINCE 1945
PO Box 1113, 901 Technology Blvd, Bozeman, MT. 59771 · Phone: (406) 587-0721 Fax: (406) 587-1176

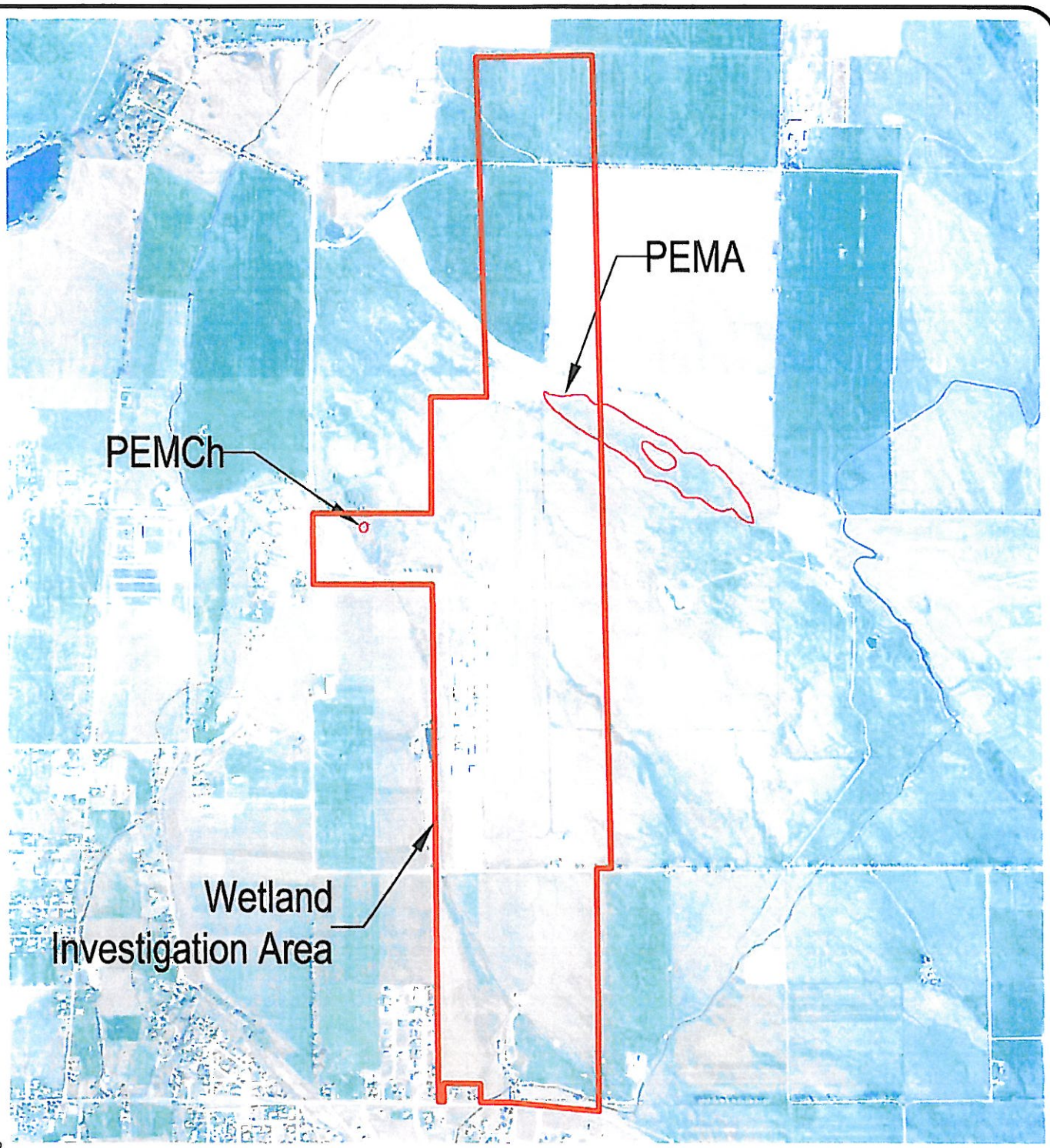
RAVALLI CO. AIRPORT SOILS MAP

CLIENT:

FIELD WORK:
DRAWN BY: KSS
CHECKED BY: KS

DATE: 4-20-04
SCALE: 1"=1600'
PROJ #: 0275.102

PLOTTED DATE: Oct/14/2008 - 11:55:53 am
DRAWING NAME: H:\0877\008\Acad\ENVIRONMENTAL\4-EXH.dwg
SHEET 1 OF 1



LEGEND:

PEMA - Palustrine, Emergent, Temporarily Flooded

PEMCh- Palustrine, Emergent, Seasonally Flooded, Diked/Impounded

Figure 4

GRAPHIC SCALE

1600 0 800 1600

(IN FEET)

1 inch = 1600 ft.

MORRISON MAIERLE, INC.

An Employee-Owned Company

ENGINEERS SCIENTISTS SURVEYORS PLANNERS SINCE 1945

PO Box 1113, 901 Technology Blvd, Bozeman, MT, 59771 - Phone: (406) 587-0721 Fax: (406) 587-1126

CLIENT:

FIELD WORK:

DRAWN BY: KSS

CHECKED BY: KS

DATE: 4-20-04

SCALE: 1"=1600'

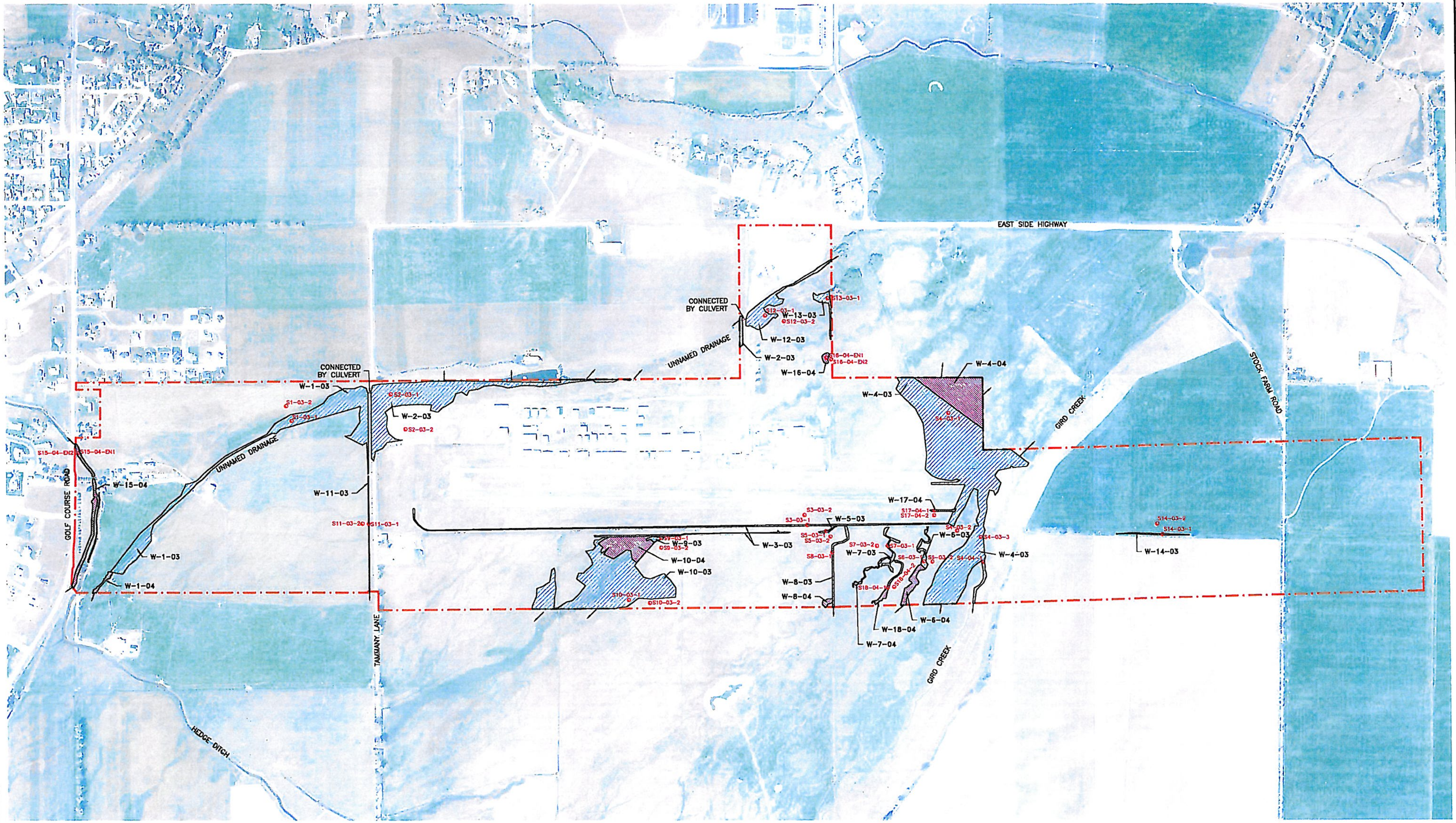
PROJ #: 0275.102

RAVALLI CO. AIRPORT NATIONAL WETLANDS INVENTORY MAP

PLOTTED DATE: Aug/28/2008 - 12:42:59 pm

DRAWING NAME: H:\0877\008\Acad\ENVIRONMENTAL\4-EXH.dwg

SHEET 1 OF 1



EAST SIDE HIGHWAY
CONNECTED BY CULVERT
UNNAMED DRAINAGE
CONNECTED BY CULVERT
W-1-03
S1-03-2
S1-03-1
S2-03-1
W-2-03
S2-03-2
S15-04-EN2
S15-04-EN1
GOLF COURSE ROAD
W-15-04
W-11-03
S11-03-2
S11-03-1
W-1-03
W-1-04
TAMMANY LANE
HEDGE DITCH
W-13-03
S12-03-1
S12-03-2
S13-03-1
W-12-03
W-2-03
S16-04-EN1
S16-04-EN2
W-16-04
W-4-04
W-4-03
S4-03-1
GIRD CREEK
STOCK FARM ROAD
W-17-04
S17-04-1
S17-04-2
S3-03-2
S3-03-1
W-5-03
S5-03-1
S5-03-2
W-6-03
S4-03-2
S4-03-3
S9-03-1
W-9-03
S9-03-2
W-10-04
W-10-03
W-3-03
S7-03-2
S7-03-1
W-7-03
S8-03-1
S6-03-1
S6-03-2
S4-04-1
W-4-03
W-8-03
W-8-04
S18-04-1
S18-04-2
S10-03-1
S10-03-2
W-18-04
W-6-04
W-7-04
GIRD CREEK
S14-03-2
S14-03-1
W-14-03

H:\0877\008\Acad\ENVIRONMENTAL\WETLANDS.dwg - Aug/28/2008

LEGEND

- WETLAND INVESTIGATION AREA
- 2003 DELINEATED WETLAND
- 2004 DELINEATED WETLAND
- S10-03-2 SAMPLE POINT (HAND APPLIED)
- WETLAND CONTINUES

GRAPHIC SCALE

400 0 200 400

(IN FEET)

EXHIBIT A

MORRISON MAIERLE, INC.

An Employee-Owned Company

ENGINEERS SCIENTISTS SURVEYORS PLANNERS SINCE 1945

CLIENT:		RAVALLI COUNTY AIRPORT WETLAND DELINEATION MAP
FIELD WORK: RM/CS DRAWN BY: KW CHECKED BY:	DATE: 01/05/05 SCALE: PROJ #: 0877.008	PLOTTED DATE: Aug/28/2008 DRAWING NAME: H:\0877\008\Acad\ENVIRONMENTAL\WETLANDS.dwg SHEET 1 OF 1

APPENDIX A

USACE Data Sheets

Data Form
Routine Wetland Determination

Job Number: **0877.008.010.0310**
City: **Hamilton**
Wetland Data Point: **W-1-03-wl.**

Project/Site: **Ravalli Co. Airport**
Applicant/Owner: **Ravalli County**
Investigator: **SR/EN**
[X] Do normal circumstances exist on the site?
[ ] Have vegetation, soils, or hydrology been disturbed?
[ ] Is the area a potential problem area?

Date: **October 28, 2004**
County: **Ravalli**
State: **MT**
Community ID: **Wetland**
Station ID: **S-1-03**
Plot ID: **1**

Vegetation

Dominant	Species	Common Name	% Cover	Indicator
Herbaceous				
	Juncus ensifolius	Rush,Three-Stamen		FACW
	Cirsium arvense	Thistle,Creeping		FACU+
	Geranium richardsonii	Crane's-Bill,Richardson's		FAC-
	Rumex crispus	Dock,Curly		FAC+
	Glyceria grandis	Grass,American Manna		No status
	Phalaris arundinacea	Grass,Reed Canary		FACW
	Epilobium ciliatum	Willow-Herb,Hairy		FACW-
	Deschampsia cespitosa	Hairgrass,Tufted		FACW
	Mimulus guttatus	Monkey-Flower,Common Large		OBL
	Carex nebrascensis	Sedge,Nebraska		OBL
	Phleum pratense	Timothy		FAC-

% Species that are OBL, FACW, or FAC (except FAC-): Cowardin Classification:
Remarks: Greater than 50% FAC or wetter

Hydrology

[ ] Recorded Data (describe in remarks)
- [ ] Stream, Lake, or Tide Gage
- [ ] Aerial Photograph
- [ ] Other (describe in remarks)

Field Observations:
- Depth of Surface Water(in.): **0**
- Depth to Free Water in Pit(in.): **>16**
- Depth to Saturated Soils(in.): **0**

Remarks

Primary Wetland Hydrology Indicators
- [ ] Inundated
- [X] Saturated in upper 12 inches
- [ ] Water marks
- [ ] Drift lines
- [ ] Sediment deposits
- [X] Drainage patterns in wetlands

Secondary Hydrology Indicators
- [ ] Oxidized root channels
- [ ] Water-stained leaves
- [ ] Local soil survey data
- [X] FAC-Neutral test
- [ ] Other (explain in remarks)

Soils

Depth (in.)	Hor.	Matrix Color	Mottle / 2nd Mottle Color	Abundance	Contrast	Texture, Structure, etc.
0-12	A	10YR 3/1				Sandy Loam Fine Subangular Blocky

Hydric Soils Indicators
- [ ] Histosol
- [ ] Histic Epipedon
- [ ] Sulfidic Odor
- [ ] Probable Aquatic Moist Regime
- [ ] Reducing Conditions
- [X] Gleyed or Low-Chroma Colors
- [ ] Concretions
- [ ] High Organic % in Surface Layer
- [ ] Organic Streaking
- [ ] Listed on Local Hydric Soils List
- [ ] Listed on National Hydric Soils List
- [ ] Other (explain in remarks)

Unit Name: **S2k Slocum loam slightly saline**
Drainage Class: **Moderately well drained**
Taxonomy: **Ustic Torrifluvents**
[ ] Field Observations match map

Remarks

Wetland Determination

[X] Hydrophytic Vegetation Present
[X] Hydric Soils Present
[X] Wetland Hydrology Present
[X] This Data Point is a Wetland

Remarks

Data Form
Routine Wetland Determination

Job Number: **0877.008.010.0310**
City: **Hamilton**
Wetland Data Point: **W-1-03-upl.**

Project/Site: **Ravalli Co. Airport**
Applicant/Owner: **Ravalli County**
Investigator: **SR/EN**
[X] Do normal circumstances exist on the site?
[ ] Have vegetation, soils, or hydrology been disturbed?
[ ] Is the area a potential problem area?

Date: **October 28, 2004**
County: **Ravalli**
State: **MT**
Community ID: **Upland**
Station ID: **S-1-03**
Plot ID: **2**

Vegetation

Dominant Species	Common Name	% Cover	Indicator
Herbaceous			
Tanacetum vulgare	Tansy,Common		NI
Lactuca serriola	Lettuce,Prickly		FACU
Medicago sativa	Alfalfa		No status
Agropyron trachycaulum	Wheatgrass,Slender		FAC

% Species that are OBL, FACW, or FAC (except FAC-):
Cowardin Classification:
Remarks: Less than 50% FAC or wetter

Hydrology

[ ] Recorded Data (describe in remarks)
- [ ] Stream, Lake, or Tide Gage
- [ ] Aerial Photograph
- [ ] Other (describe in remarks)

Field Observations:
- Depth of Surface Water(in.): **0**
- Depth to Free Water in Pit(in.): **>16**
- Depth to Saturated Soils(in.): **>16**

Primary Wetland Hydrology Indicators
- [ ] Inundated
- [ ] Saturated in upper 12 inches
- [ ] Water marks
- [ ] Drift lines
- [ ] Sediment deposits
- [ ] Drainage patterns in wetlands

Secondary Hydrology Indicators
- [ ] Oxidized root channels
- [ ] Water-stained leaves
- [ ] Local soil survey data
- [ ] FAC-Neutral test
- [ ] Other (explain in remarks)

Remarks

Soils

Depth (in.)	Hor.	Matrix Color	Mottle / 2nd Mottle Color	Abundance	Contrast	Texture, Structure, etc.
0-17	A	10YR 3/3				Sandy Loam Fine Subangular Blocky

Hydric Soils Indicators
- [ ] Histosol
- [ ] Histic Epipedon
- [ ] Sulfidic Odor
- [ ] Probable Aquatic Moist Regime
- [ ] Reducing Conditions
- [ ] Gleyed or Low-Chroma Colors
- [ ] Concretions
- [ ] High Organic % in Surface Layer
- [ ] Organic Streaking
- [ ] Listed on Local Hydric Soils List
- [ ] Listed on National Hydric Soils List
- [ ] Other (explain in remarks)

Unit Name: **S2k Slocum loam slightly saline**
Drainage Class: **Moderately well drained**
Taxonomy: **Ustic Torrifluvents**
[ ] Field Observations match map

Remarks

Wetland Determination

- [ ] Hydrophytic Vegetation Present
- [ ] Hydric Soils Present
- [ ] Wetland Hydrology Present
- [ ] This Data Point is a Wetland

Remarks

Data Form
Routine Wetland Determination

Job Number: **0877.008.010.0310**
City: **Hamilton**
Wetland Data Point: **W-2-03-wl.**

Project/Site: **Ravalli Co. Airport**
Applicant/Owner: **Ravalli County**
Investigator: **SR/EN**
[X] Do normal circumstances exist on the site?
[ ] Have vegetation, soils, or hydrology been disturbed?
[ ] Is the area a potential problem area?

Date: **October 28, 2004**
County: **Ravalli**
State: **MT**
Community ID: **Wetland**
Station ID: **S-2-03**
Plot ID: **1**

Vegetation

Dominant	Species	Common Name	% Cover	Indicator
Herbaceous				
	Cirsium arvense	Thistle,Creeping		FACU+
	Equisetum laevigatum	Scouring-Rush,Smooth		FACW
	Equisetum arvense	Horsetail,Field		FAC
	Deschampsia cespitosa	Hairgrass,Tufted		FACW
	Phalaris arundinacea	Grass,Reed Canary		FACW
	Carex nebrascensis	Sedge,Nebraska		OBL
Shrub				
	Salix spp.	Willow spp.		NI, OBL-FAC

% Species that are OBL, FACW, or FAC (except FAC-):
Cowardin Classification:
Remarks: Greater than 50% FAC or wetter

Hydrology

[ ] Recorded Data (describe in remarks)
- [ ] Stream, Lake, or Tide Gage
- [ ] Aerial Photograph
- [ ] Other (describe in remarks)

Field Observations:
- Depth of Surface Water(in.): **0**
- Depth to Free Water in Pit(in.): **>16**
- Depth to Saturated Soils(in.): **>16**

Remarks

Primary Wetland Hydrology Indicators
- [ ] Inundated
- [ ] Saturated in upper 12 inches
- [ ] Water marks
- [ ] Drift lines
- [ ] Sediment deposits
- [X] Drainage patterns in wetlands

Secondary Hydrology Indicators
- [ ] Oxidized root channels
- [ ] Water-stained leaves
- [ ] Local soil survey data
- [X] FAC-Neutral test
- [ ] Other (explain in remarks)

Soils

Depth (in.)	Hor.	Matrix Color	Mottle / 2nd Mottle Color	Abundance	Contrast	Texture, Structure, etc.
0-12	A	10YR 3/1				Sandy Loam Fine Subangular Blocky
12-16	A	7.5YR 2.5/1				Silty Clay Coarse Subangular Blocky

Hydric Soils Indicators
- [ ] Histosol
- [ ] Histic Epipedon
- [ ] Sulfidic Odor
- [ ] Probable Aquatic Moist Regime
- [ ] Reducing Conditions
- [X] Gleyed or Low-Chroma Colors
- [ ] Concretions
- [ ] High Organic % in Surface Layer
- [ ] Organic Streaking
- [ ] Listed on Local Hydric Soils List
- [ ] Listed on National Hydric Soils List
- [ ] Other (explain in remarks)

Unit Name: **C3r Corvallis silt loam poorly drained var.** Taxonomy: **Typic Haplaquolls**
Drainage Class: **Very poorly drained**
[ ] Field Observations match map

Remarks

Wetland Determination

- [X] Hydrophytic Vegetation Present
- [X] Hydric Soils Present
- [X] Wetland Hydrology Present

[X] This Data Point is a Wetland

Remarks

Data Form
Routine Wetland Determination

Job Number: **0877.008.010.0310**
City: **Hamilton**
Wetland Data Point: **W-2-03-upl.**

Project/Site: **Ravalli Co. Airport**
Applicant/Owner: **Ravalli County**
Investigator: **SR/EN**
[X] Do normal circumstances exist on the site?
[ ] Have vegetation, soils, or hydrology been disturbed?
[ ] Is the area a potential problem area?

Date: **October 28, 2004**
County: **Ravalli**
State: **MT**
Community ID: **Upland**
Station ID: **S-2-03**
Plot ID: **2**

Vegetation

Dominant Species	Common Name	% Cover	Indicator
Herbaceous			
Tanacetum vulgare	Tansy,Common		NI
Lactuca serriola	Lettuce,Prickly		FACU
Agropyron trachycaulum	Wheatgrass,Slender		FAC
Cynoglossum officinale	Houndstongue		FACU
Shrub			
Symphoricarpos albus	Snowberry		FACU

% Species that are OBL, FACW, or FAC (except FAC-):
Cowardin Classification:
Remarks: Less than 50% FAC or wetter

Hydrology

[ ] Recorded Data (describe in remarks)
- [ ] Stream, Lake, or Tide Gage
- [ ] Aerial Photograph
- [ ] Other (describe in remarks)

Field Observations:
- Depth of Surface Water(in.): **0**
- Depth to Free Water in Pit(in.): **>16**
- Depth to Saturated Soils(in.): **>16**

Remarks

Primary Wetland Hydrology Indicators
- [ ] Inundated
- [ ] Saturated in upper 12 inches
- [ ] Water marks
- [ ] Drift lines
- [ ] Sediment deposits
- [ ] Drainage patterns in wetlands

Secondary Hydrology Indicators
- [ ] Oxidized root channels
- [ ] Water-stained leaves
- [ ] Local soil survey data
- [ ] FAC-Neutral test
- [ ] Other (explain in remarks)

Soils

Depth (in.)	Hor.	Matrix Color	Mottle / 2nd Mottle Color	Abundance	Contrast	Texture, Structure, etc.
0-14	A	10YR 3/1				Sandy Clay Loam Medium Subangular Blocky

Hydric Soils Indicators
- [ ] Histosol
- [ ] Histic Epipedon
- [ ] Sulfidic Odor
- [ ] Probable Aquatic Moist Regime
- [ ] Reducing Conditions
- [X] Gleyed or Low-Chroma Colors
- [ ] Concretions
- [ ] High Organic % in Surface Layer
- [ ] Organic Streaking
- [ ] Listed on Local Hydric Soils List
- [ ] Listed on National Hydric Soils List
- [ ] Other (explain in remarks)

Unit Name: **C3r Corvallis silt loam poorly drained var.** Taxonomy: **Typic Haplaquolls**
Drainage Class: **Very Poorly drained**
[ ] Field Observations match map

Remarks

Wetland Determination

- [ ] Hydrophytic Vegetation Present
- [ ] Hydric Soils Present
- [ ] Wetland Hydrology Present

[ ] This Data Point is a Wetland

Remarks

Data Form
Routine Wetland Determination

Job Number: **0877.008.010.0310**
City: **Hamilton**
Wetland Data Point: **W-3-03-wl.**

Project/Site: **Ravalli Co. Airport**
Applicant/Owner: **Ravalli County**
Investigator: **SR/EN**
[X] Do normal circumstances exist on the site?
[ ] Have vegetation, soils, or hydrology been disturbed?
[ ] Is the area a potential problem area?

Date: **October 28, 2004**
County: **Ravalli**
State: **MT**
Community ID: **Wetland**
Station ID: **S-3-03**
Plot ID: **1**

Vegetation

Dominant	Species	Common Name	% Cover	Indicator
Herbaceous				
	Epilobium ciliatum	Willow-Herb,Hairy		FACW-
	Carex nebrascensis	Sedge,Nebraska		OBL
	Phalaris arundinacea	Grass,Reed Canary		FACW
Shrub				
	Salix spp.	Willow spp.		NI, OBL-FAC

% Species that are OBL, FACW, or FAC (except FAC-):
Cowardin Classification:
Remarks: Greater than 50% FAC or wetter

Hydrology

[ ] Recorded Data (describe in remarks)
- [ ] Stream, Lake, or Tide Gage
- [ ] Aerial Photograph
- [ ] Other (describe in remarks)

Field Observations:
- Depth of Surface Water(in.): **1**
- Depth to Free Water in Pit(in.): **0**
- Depth to Saturated Soils(in.): **0**

Remarks

Primary Wetland Hydrology Indicators
- [X] Inundated
- [X] Saturated in upper 12 inches
- [ ] Water marks
- [ ] Drift lines
- [ ] Sediment deposits
- [ ] Drainage patterns in wetlands

Secondary Hydrology Indicators
- [ ] Oxidized root channels
- [ ] Water-stained leaves
- [ ] Local soil survey data
- [X] FAC-Neutral test
- [ ] Other (explain in remarks)

Soils

Depth (in.)	Hor.	Matrix Color	Mottle / 2nd Mottle Color	Abundance	Contrast	Texture, Structure, etc.
0-12	A	10YR 2/1				Sandy Clay Loam Medium Subangular Blocky

Hydric Soils Indicators
- [ ] Histosol
- [ ] Histic Epipedon
- [ ] Sulfidic Odor
- [ ] Probable Aquatic Moist Regime
- [ ] Reducing Conditions
- [X] Gleyed or Low-Chroma Colors
- [ ] Concretions
- [ ] High Organic % in Surface Layer
- [ ] Organic Streaking
- [ ] Listed on Local Hydric Soils List
- [ ] Listed on National Hydric Soils List
- [ ] Other (explain in remarks)

Unit Name: **C3s Corvallis silt loam slightly saline**
Drainage Class: **Somewhat poorly drained**
Taxonomy: **Fluvaquentic Haploborolls**
[ ] Field Observations match map

Remarks

Wetland Determination

- [X] Hydrophytic Vegetation Present
- [X] Hydric Soils Present
- [X] Wetland Hydrology Present

[X] This Data Point is a Wetland

Remarks

Data Form
Routine Wetland Determination

Job Number: **0877.008.010.0310**
City: **Hamilton**
Wetland Data Point: **W-3-03-upl.**

Project/Site: **Ravalli Co. Airport**
Applicant/Owner: **Ravalli County**
Investigator: **SR/EN**
[X] Do normal circumstances exist on the site?
[ ] Have vegetation, soils, or hydrology been disturbed?
[ ] Is the area a potential problem area?

Date: **October 28, 2004**
County: **Ravalli**
State: **MT**
Community ID: **Upland**
Station ID: **S-3-03**
Plot ID: **2**

Vegetation

Dominant	Species	Common Name	% Cover	Indicator
Herbaceous				
	Cynoglossum officinale	Houndstongue		FACU
	Centaurea maculosa	Knapweed, Spotted		No Status
	Poa pratensis	Bluegrass,Kentucky		FAC
	Cirsium arvense	Thistle,Creeping		FACU+
	Dactylis glomerata	Grass,Orchard		FACU
	Sisymbrium altissimum	Mustard,Tall Tumble		FACU-
	Carduus nutans	Musk thistle		No status
	Bouteloua gracilis	Blue grama		
	Lactuca serriola	Lettuce,Prickly		FACU
Shrub				
	Symphoricarpos albus	Snowberry		FACU

% Species that are OBL, FACW, or FAC (except FAC-):
Cowardin Classification:
Remarks: Less than 50% FAC or wetter

Hydrology

[ ] Recorded Data (describe in remarks)
- [ ] Stream, Lake, or Tide Gage
- [ ] Aerial Photograph
- [ ] Other (describe in remarks)

Field Observations:
- Depth of Surface Water(in.): **0**
- Depth to Free Water in Pit(in.): **>16**
- Depth to Saturated Soils(in.): **>16**

Remarks

Primary Wetland Hydrology Indicators
- [ ] Inundated
- [ ] Saturated in upper 12 inches
- [ ] Water marks
- [ ] Drift lines
- [ ] Sediment deposits
- [ ] Drainage patterns in wetlands

Secondary Hydrology Indicators
- [ ] Oxidized root channels
- [ ] Water-stained leaves
- [ ] Local soil survey data
- [ ] FAC-Neutral test
- [ ] Other (explain in remarks)

Soils

Depth (in.)	Hor.	Matrix Color	Mottle / 2nd Mottle Color	Abundance	Contrast	Texture, Structure, etc.
0-16	A	2.5Y 3/1				Sandy Clay Loam Medium Subangular Blocky

Hydric Soils Indicators
- [ ] Histosol
- [ ] Histic Epipedon
- [ ] Sulfidic Odor
- [ ] Probable Aquatic Moist Regime
- [ ] Reducing Conditions
- [X] Gleyed or Low-Chroma Colors
- [ ] Concretions
- [ ] High Organic % in Surface Layer
- [ ] Organic Streaking
- [ ] Listed on Local Hydric Soils List
- [ ] Listed on National Hydric Soils List
- [ ] Other (explain in remarks)

Unit Name: **C3s Corvallis silt loam slightly saline**
Drainage Class: **Somewhat poorly drained**
Taxonomy: **Fluvaquentic Haploborolls**
[ ] Field Observations match map

Remarks

Wetland Determination

- [ ] Hydrophytic Vegetation Present
- [X] Hydric Soils Present
- [ ] Wetland Hydrology Present

[ ] This Data Point is a Wetland

Remarks

Data Form
Routine Wetland Determination

Job Number: **0877.008.010.0310**
City: **Hamilton**
Wetland Data Point: **W-4-03-wl.**

Project/Site: **Ravalli Co. Airport**
Applicant/Owner: **Ravalli County**
Investigator: **SR/EN**
[X] Do normal circumstances exist on the site?
[ ] Have vegetation, soils, or hydrology been disturbed?
[ ] Is the area a potential problem area?

Date: **October 28, 2004**
County: **Ravalli**
State: **MT**
Community ID: **Wetland**
Station ID: **S-4-03**
Plot ID: **1-West**

Vegetation

Dominant	Species	Common Name	% Cover	Indicator
Herbaceous				
	Poa palustris	Bluegrass,Fowl		FAC
	Rumex crispus	Dock,Curly		FAC+
	Carex nebrascensis	Sedge,Nebraska		OBL
	Juncus balticus	Rush,Baltic		FACW+
	Deschampsia cespitosa	Hairgrass,Tufted		FACW

% Species that are OBL, FACW, or FAC (except FAC-): Cowardin Classification:
Remarks: Greater than 50% FAC or wetter

Hydrology

[ ] Recorded Data (describe in remarks)
- [ ] Stream, Lake, or Tide Gage
- [ ] Aerial Photograph
- [ ] Other (describe in remarks)

Field Observations:
- Depth of Surface Water(in.): **0**
- Depth to Free Water in Pit(in.): **14**
- Depth to Saturated Soils(in.): **0**

Primary Wetland Hydrology Indicators
- [ ] Inundated
- [X] Saturated in upper 12 inches
- [ ] Water marks
- [ ] Drift lines
- [ ] Sediment deposits
- [X] Drainage patterns in wetlands

Secondary Hydrology Indicators
- [ ] Oxidized root channels
- [ ] Water-stained leaves
- [ ] Local soil survey data
- [X] FAC-Neutral test
- [ ] Other (explain in remarks)

Remarks
Areas of wetland were inundated.

Soils

Depth (in.)	Hor.	Matrix Color	Mottle / 2nd Mottle Color	Abundance	Contrast	Texture, Structure, etc.
0-10	A					

Hydric Soils Indicators
- [ ] Histosol
- [X] Histic Epipedon
- [ ] Sulfidic Odor
- [ ] Probable Aquatic Moist Regime
- [ ] Reducing Conditions
- [ ] Gleyed or Low-Chroma Colors
- [ ] Concretions
- [ ] High Organic % in Surface Layer
- [ ] Organic Streaking
- [ ] Listed on Local Hydric Soils List
- [ ] Listed on National Hydric Soils List
- [ ] Other (explain in remarks)

Unit Name: **C3t Corvallis silt loam moderately saline** Taxonomy: **Fluvaquentic Haploborolls**
Drainage Class: **Poorly drained** [ ] Field Observations match map

Remarks

Wetland Determination

- [X] Hydrophytic Vegetation Present
- [X] Hydric Soils Present
- [X] Wetland Hydrology Present

[X] This Data Point is a Wetland

Remarks

Data Form
Routine Wetland Determination

Job Number: **0877.008.010.0310**
City: **Hamilton**
Wetland Data Point: **W-4-03-upl.**

Project/Site: **Ravalli Co. Airport**
Applicant/Owner: **Ravalli County**
Investigator: **SR/EN**
[X] Do normal circumstances exist on the site?
[ ] Have vegetation, soils, or hydrology been disturbed?
[ ] Is the area a potential problem area?

Date: **October 28, 2004**
County: **Ravalli**
State: **MT**
Community ID: **Upland**
Station ID: **S-4-03**
Plot ID: **2**

Vegetation

Dominant	Species	Common Name	% Cover	Indicator
	Carduus nutans	Musk thistle		No status
Shrub				
	Rosa woodsii	Rose,Woods		FACU
	Symphoricarpos albus	Snowberry		FACU

% Species that are OBL, FACW, or FAC (except FAC-): Cowardin Classification:
Remarks: Less than 50% FAC or wetter

Hydrology

[ ] Recorded Data (describe in remarks)
- [ ] Stream, Lake, or Tide Gage
- [ ] Aerial Photograph
- [ ] Other (describe in remarks)

Field Observations:
- Depth of Surface Water(in.): **0**
- Depth to Free Water in Pit(in.): **>24**
- Depth to Saturated Soils(in.): **>24**

Remarks

Primary Wetland Hydrology Indicators
- [ ] Inundated
- [ ] Saturated in upper 12 inches
- [ ] Water marks
- [ ] Drift lines
- [ ] Sediment deposits
- [ ] Drainage patterns in wetlands

Secondary Hydrology Indicators
- [ ] Oxidized root channels
- [ ] Water-stained leaves
- [ ] Local soil survey data
- [ ] FAC-Neutral test
- [ ] Other (explain in remarks)

Soils

Depth (in.)	Hor.	Matrix Color	Mottle / 2nd Mottle Color	Abundance	Contrast	Texture, Structure, etc.
0-14	A	10YR 3/1				Sandy Loam Fine Subangular Blocky

Hydric Soils Indicators
- [ ] Histosol
- [ ] Histic Epipedon
- [ ] Sulfidic Odor
- [ ] Probable Aquatic Moist Regime
- [ ] Reducing Conditions
- [X] Gleyed or Low-Chroma Colors
- [ ] Concretions
- [ ] High Organic % in Surface Layer
- [ ] Organic Streaking
- [ ] Listed on Local Hydric Soils List
- [ ] Listed on National Hydric Soils List
- [ ] Other (explain in remarks)

Unit Name: **C3r Corvallis silt loam poorly drained var.** Taxonomy: **Typic Haplaquolls**
Drainage Class: **very poorly drained** [ ] Field Observations match map

Remarks

Wetland Determination

- [ ] Hydrophytic Vegetation Present
- [X] Hydric Soils Present
- [ ] Wetland Hydrology Present

[ ] This Data Point is a Wetland

Remarks

Data Form
Routine Wetland Determination

Job Number: **0877.008.010.0310**
City: **Hamilton**
Wetland Data Point: **W-4-03-wl.**

Project/Site: **Ravalli Co. Airport**
Applicant/Owner: **Ravalli County**
Investigator: **SR/EN**
[X] Do normal circumstances exist on the site?
[ ] Have vegetation, soils, or hydrology been disturbed?
[ ] Is the area a potential problem area?

Date: **October 28, 2004**
County: **Ravalli**
State: **MT**
Community ID: **Wetland**
Station ID: **S-4-03**
Plot ID: **3-East**

Vegetation

Dominant	Species	Common Name	% Cover	Indicator
Herbaceous				
	Hordeum jubatum	Barley,Fox-Tail		FAC
	Veronica americana	Speedwell,American		OBL
	Carex nebrascensis	Sedge,Nebraska		OBL
	Glyceria grandis	Grass,American Manna		No status
	Phalaris arundinacea	Grass,Reed Canary		FACW

% Species that are OBL, FACW, or FAC (except FAC-): Cowardin Classification:
Remarks: Greater than 50% FAC or wetter

Hydrology

[ ] Recorded Data (describe in remarks)
- [ ] Stream, Lake, or Tide Gage
- [ ] Aerial Photograph
- [ ] Other (describe in remarks)

Field Observations:
- Depth of Surface Water(in.): **0**
- Depth to Free Water in Pit(in.): **>16**
- Depth to Saturated Soils(in.): **0**

Remarks

Primary Wetland Hydrology Indicators
- [ ] Inundated
- [X] Saturated in upper 12 inches
- [ ] Water marks
- [ ] Drift lines
- [ ] Sediment deposits
- [X] Drainage patterns in wetlands

Secondary Hydrology Indicators
- [ ] Oxidized root channels
- [ ] Water-stained leaves
- [ ] Local soil survey data
- [X] FAC-Neutral test
- [ ] Other (explain in remarks)

Soils

Depth (in.)	Hor.	Matrix Color	Mottle / 2nd Mottle Color	Abundance	Contrast	Texture, Structure, etc.
0-12	A	10YR 2/1				Sandy Loam Fine Subangular Blocky

Hydric Soils Indicators
- [ ] Histosol
- [ ] Histic Epipedon
- [ ] Sulfidic Odor
- [ ] Probable Aquatic Moist Regime
- [ ] Reducing Conditions
- [X] Gleyed or Low-Chroma Colors
- [ ] Concretions
- [ ] High Organic % in Surface Layer
- [ ] Organic Streaking
- [ ] Listed on Local Hydric Soils List
- [ ] Listed on National Hydric Soils List
- [ ] Other (explain in remarks)

Unit Name: **C3r Corvallis silt loam poorly drained var.** Taxonomy: **Typic Haplaquolls**
Drainage Class: **Very poorly drained**
[ ] Field Observations match map

Remarks

Wetland Determination

- [X] Hydrophytic Vegetation Present
- [X] Hydric Soils Present
- [X] Wetland Hydrology Present

[X] This Data Point is a Wetland

Remarks

Data Form
Routine Wetland Determination

Job Number: **0877.008.010.0310**
City: **Hamilton**
Wetland Data Point: **W-4-04-wl.**

Project/Site: **Ravalli Co. Airport**
Applicant/Owner: **Ravalli County**
Investigator: **SR/EN**
[X] Do normal circumstances exist on the site?
[ ] Have vegetation, soils, or hydrology been disturbed?
[ ] Is the area a potential problem area?

Date: **October 28, 2004**
County: **Ravalli**
State: **MT**
Community ID: **Wetland**
Station ID: **S-4-04**
Plot ID: **4-Gird Creek**

Vegetation

Dominant Species	Common Name	% Cover	Indicator
Herbaceous			
Juncus balticus	Rush,Baltic		FACW+
Carex nebrascensis	Sedge,Nebraska		OBL
Phleum pratense	Timothy		FAC-
Deschampsia cespitosa	Hairgrass,Tufted		FACW
Glyceria grandis	Grass,American Manna		No status
Veronica americana	Speedwell,American		OBL
Phalaris arundinacea	Grass,Reed Canary		FACW

% Species that are OBL, FACW, or FAC (except FAC-): Cowardin Classification:
Remarks: Greater than 50% FAC or wetter

Hydrology

[ ] Recorded Data (describe in remarks)
- [ ] Stream, Lake, or Tide Gage
- [ ] Aerial Photograph
- [ ] Other (describe in remarks)

Field Observations:
- Depth of Surface Water(in.): **2**
- Depth to Free Water in Pit(in.): **0**
- Depth to Saturated Soils(in.): **0**

Remarks

Primary Wetland Hydrology Indicators
- [X] Inundated
- [X] Saturated in upper 12 inches
- [ ] Water marks
- [ ] Drift lines
- [ ] Sediment deposits
- [X] Drainage patterns in wetlands

Secondary Hydrology Indicators
- [ ] Oxidized root channels
- [ ] Water-stained leaves
- [ ] Local soil survey data
- [X] FAC-Neutral test
- [ ] Other (explain in remarks)

Soils

Depth (in.)	Hor.	Matrix Color	Mottle / 2nd Mottle Color	Abundance	Contrast	Texture, Structure, etc.
0-8	A	10YR 4/2				Loamy Sand Loose
8+	Rock					

Hydric Soils Indicators
- [ ] Histosol
- [ ] Histic Epipedon
- [ ] Sulfidic Odor
- [ ] Probable Aquatic Moist Regime
- [ ] Reducing Conditions
- [X] Gleyed or Low-Chroma Colors
- [ ] Concretions
- [ ] High Organic % in Surface Layer
- [X] Organic Streaking
- [ ] Listed on Local Hydric Soils List
- [ ] Listed on National Hydric Soils List
- [ ] Other (explain in remarks)

Unit Name: **C3r Corvallis silt loam poorly drained var.** Taxonomy: **Typic Haplaquolls**
Drainage Class: **Very poorly drained** [ ] Field Observations match map

Remarks

Wetland Determination

- [X] Hydrophytic Vegetation Present
- [X] Hydric Soils Present
- [X] Wetland Hydrology Present

[X] This Data Point is a Wetland

Remarks

Data Form
Routine Wetland Determination

Job Number: **0877.008.010.0310**
City: **Hamilton**
Wetland Data Point: **W-5-03-wl.**

Project/Site: **Ravalli Co. Airport**
Applicant/Owner: **Ravalli County**
Investigator: **SR/EN**
[X] Do normal circumstances exist on the site?
[ ] Have vegetation, soils, or hydrology been disturbed?
[ ] Is the area a potential problem area?

Date: **October 28, 2004**
County: **Ravalli**
State: **MT**
Community ID: **Wetland**
Station ID: **S-5-03**
Plot ID: **1**

Vegetation

Dominant	Species	Common Name	% Cover	Indicator
Herbaceous				
	Carex nebrascensis	Sedge,Nebraska		OBL
	Solanum dulcamara	Nightshade,Climbing		FAC+
	Veronica americana	Speedwell,American		OBL
	Juncus tenuis	Rush,Slender		FACW-
	Trifolium hybridum	Clover,Alsike		FAC
	Rumex crispus	Dock,Curly		FAC+
	Juncus balticus	Rush,Baltic		FACW+
	Deschampsia cespitosa	Hairgrass,Tufted		FACW
Tree				
	Salix bebbiana	Willow,Bebb		FACW

% Species that are OBL, FACW, or FAC (except FAC-):
Cowardin Classification:
Remarks: Greater than 50% FAC or wetter

Hydrology

[ ] Recorded Data (describe in remarks)
- [ ] Stream, Lake, or Tide Gage
- [ ] Aerial Photograph
- [ ] Other (describe in remarks)

Field Observations:
- Depth of Surface Water(in.): **0**
- Depth to Free Water in Pit(in.): **>16**
- Depth to Saturated Soils(in.): **0**

Remarks

Primary Wetland Hydrology Indicators
- [ ] Inundated
- [X] Saturated in upper 12 inches
- [ ] Water marks
- [ ] Drift lines
- [ ] Sediment deposits
- [X] Drainage patterns in wetlands

Secondary Hydrology Indicators
- [ ] Oxidized root channels
- [ ] Water-stained leaves
- [ ] Local soil survey data
- [ ] FAC-Neutral test
- [ ] Other (explain in remarks)

Soils

Depth (in.)	Hor.	Matrix Color	Mottle / 2nd Mottle Color	Abundance	Contrast	Texture, Structure, etc.
0-6	A	10YR 3/1				Sandy Loam Medium Subangular Blocky

Hydric Soils Indicators
- [ ] Histosol
- [ ] Histic Epipedon
- [ ] Sulfidic Odor
- [ ] Probable Aquatic Moist Regime
- [ ] Reducing Conditions
- [X] Gleyed or Low-Chroma Colors
- [ ] Concretions
- [ ] High Organic % in Surface Layer
- [ ] Organic Streaking
- [ ] Listed on Local Hydric Soils List
- [ ] Listed on National Hydric Soils List
- [ ] Other (explain in remarks)

Unit Name: **C3s Corvallis silt loam slightly saline**
Drainage Class: **Somewhat poorly drained**
Taxonomy: **Fluvaquentic Haploborolls**
[ ] Field Observations match map

Remarks
6 inches+ is rock

Wetland Determination

- [X] Hydrophytic Vegetation Present
- [X] Hydric Soils Present
- [X] Wetland Hydrology Present

[X] This Data Point is a Wetland

Remarks

Data Form
Routine Wetland Determination

Job Number: **0877.008.010.0310**
City: **Hamilton**
Wetland Data Point: **W-5-03-upl.**

Project/Site: **Ravalli Co. Airport**
Applicant/Owner: **Ravalli County**
Investigator: **SR/EN**
[X] Do normal circumstances exist on the site?
[ ] Have vegetation, soils, or hydrology been disturbed?
[ ] Is the area a potential problem area?

Date: **October 28, 2004**
County: **Ravalli**
State: **MT**
Community ID: **Upland**
Station ID: **S-5-03**
Plot ID: **2**

Vegetation

Dominant	Species	Common Name	% Cover	Indicator
Herbaceous				
	Lactuca serriola	Lettuce,Prickly		FACU
	Equisetum laevigatum	Scouring-Rush,Smooth		FACW
	Agropyron trachycaulum	Wheatgrass,Slender		FAC
	Trifolium spp.	Clover spp.		NI, FACW+-UPL
	Taraxacum officinale	Dandelion,Common		FACU
	Carduus nutans	Musk thistle		No status
	Centaurea maculosa	Knapweed, Spotted		No Status
Shrub				
	Rosa woodsii	Rose,Woods		FACU

% Species that are OBL, FACW, or FAC (except FAC-):
Cowardin Classification:
Remarks: Less than 50% FAC or wetter

Hydrology

[ ] Recorded Data (describe in remarks)
- [ ] Stream, Lake, or Tide Gage
- [ ] Aerial Photograph
- [ ] Other (describe in remarks)

Field Observations:
- Depth of Surface Water(in.): **0**
- Depth to Free Water in Pit(in.): **>16**
- Depth to Saturated Soils(in.): **>16**

Remarks

Primary Wetland Hydrology Indicators
- [ ] Inundated
- [ ] Saturated in upper 12 inches
- [ ] Water marks
- [ ] Drift lines
- [ ] Sediment deposits
- [ ] Drainage patterns in wetlands

Secondary Hydrology Indicators
- [ ] Oxidized root channels
- [ ] Water-stained leaves
- [ ] Local soil survey data
- [ ] FAC-Neutral test
- [ ] Other (explain in remarks)

Soils

Depth (in.)	Hor.	Matrix Color	Mottle / 2nd Mottle Color	Abundance	Contrast	Texture, Structure, etc.
0-16	A	10YR 3/1				Sandy Clay Loam Medium Subangular Blocky

Hydric Soils Indicators
- [ ] Histosol
- [ ] Histic Epipedon
- [ ] Sulfidic Odor
- [ ] Probable Aquatic Moist Regime
- [ ] Reducing Conditions
- [X] Gleyed or Low-Chroma Colors
- [ ] Concretions
- [ ] High Organic % in Surface Layer
- [ ] Organic Streaking
- [ ] Listed on Local Hydric Soils List
- [ ] Listed on National Hydric Soils List
- [ ] Other (explain in remarks)

Unit Name: **C3s Corvallis silt loam slightly saline**
Drainage Class: **Somewhat poorly drained**
Taxonomy: **Fluvauqentic Haploborolls**
[ ] Field Observations match map

Remarks

Wetland Determination

- [ ] Hydrophytic Vegetation Present
- [X] Hydric Soils Present
- [ ] Wetland Hydrology Present

[ ] This Data Point is a Wetland

Remarks

Data Form
Routine Wetland Determination

Job Number: **0877.008.010.0310**
City: **Hamilton**
Wetland Data Point: **W-6-03-wl.**

Project/Site: **Ravalli Co. Airport**
Applicant/Owner: **Ravalli County**
Investigator: **SR/EN**
[X] Do normal circumstances exist on the site?
[ ] Have vegetation, soils, or hydrology been disturbed?
[ ] Is the area a potential problem area?

Date: **October 28, 2004**
County: **Ravalli**
State: **MT**
Community ID: **Wetland**
Station ID: **S-6-03**
Plot ID: **1**

Vegetation

Dominant	Species	Common Name	% Cover	Indicator
	Equisetum laevigatum	Scouring-Rush,Smooth		FACW
Herbaceous				
	Phalaris arundinacea	Grass,Reed Canary		FACW
	Rumex crispus	Dock,Curly		FAC+
	Deschampsia cespitosa	Hairgrass,Tufted		FACW
	Carex spp.	Sedge spp.		NI, OBL-FAC
	Juncus balticus	Rush,Baltic		FACW+
	Carex nebrascensis	Sedge,Nebraska		OBL

% Species that are OBL, FACW, or FAC (except FAC-):
Cowardin Classification:
Remarks: Greater than 50% FAC or wetter

Hydrology

[ ] Recorded Data (describe in remarks)
- [ ] Stream, Lake, or Tide Gage
- [ ] Aerial Photograph
- [ ] Other (describe in remarks)

Field Observations:
- Depth of Surface Water(in.): **0**
- Depth to Free Water in Pit(in.): **>16**
- Depth to Saturated Soils(in.): **>16**

Remarks

Primary Wetland Hydrology Indicators
- [ ] Inundated
- [ ] Saturated in upper 12 inches
- [ ] Water marks
- [ ] Drift lines
- [ ] Sediment deposits
- [X] Drainage patterns in wetlands

Secondary Hydrology Indicators
- [ ] Oxidized root channels
- [ ] Water-stained leaves
- [ ] Local soil survey data
- [X] FAC-Neutral test
- [ ] Other (explain in remarks)

Soils

Depth (in.)	Hor.	Matrix Color	Mottle / 2nd Mottle Color	Abundance	Contrast	Texture, Structure, etc.
0-16	A	10YR 3/1				Clay Loam Medium Subangular Blocky

Hydric Soils Indicators
- [ ] Histosol
- [ ] Histic Epipedon
- [X] Sulfidic Odor
- [ ] Probable Aquatic Moist Regime
- [ ] Reducing Conditions
- [X] Gleyed or Low-Chroma Colors
- [ ] Concretions
- [ ] High Organic % in Surface Layer
- [ ] Organic Streaking
- [ ] Listed on Local Hydric Soils List
- [ ] Listed on National Hydric Soils List
- [ ] Other (explain in remarks)

Unit Name: **C3r Corvallis silt loam poorly drained var.** Taxonomy: **Typic Haplaquolls**
Drainage Class: **Very poorly drained**
[X] Field Observations match map

Remarks

Wetland Determination

- [X] Hydrophytic Vegetation Present
- [X] Hydric Soils Present
- [X] Wetland Hydrology Present

[X] This Data Point is a Wetland

Remarks
Shares upland data point with W-18-04.

Data Form
Routine Wetland Determination

Job Number: **0877.008.010.0310**
City: **Hamilton**
Wetland Data Point: **W-6-03-upl.**

Project/Site: **Ravalli Co. Airport**
Applicant/Owner: **Ravalli County**
Investigator: **SR/EN**
[X] Do normal circumstances exist on the site?
[ ] Have vegetation, soils, or hydrology been disturbed?
[ ] Is the area a potential problem area?

Date: **October 28, 2004**
County: **Ravalli**
State: **MT**
Community ID: **Upland**
Station ID: **S-6-03**
Plot ID: **2**

Vegetation

Dominant	Species	Common Name	% Cover	Indicator
Shrub				
	Rosa woodsii	Rose, Woods		FACU
	Symphoricarpos albus	Snowberry		FACU

% Species that are OBL, FACW, or FAC (except FAC-):
Cowardin Classification:
Remarks: Less than 50% FAC or wetter

Hydrology

[ ] Recorded Data (describe in remarks)
- [ ] Stream, Lake, or Tide Gage
- [ ] Aerial Photograph
- [ ] Other (describe in remarks)

Field Observations:
- Depth of Surface Water(in.): **0**
- Depth to Free Water in Pit(in.): **>16**
- Depth to Saturated Soils(in.): **>16**

Remarks

Primary Wetland Hydrology Indicators
- [ ] Inundated
- [ ] Saturated in upper 12 inches
- [ ] Water marks
- [ ] Drift lines
- [ ] Sediment deposits
- [ ] Drainage patterns in wetlands

Secondary Hydrology Indicators
- [ ] Oxidized root channels
- [ ] Water-stained leaves
- [ ] Local soil survey data
- [ ] FAC-Neutral test
- [ ] Other (explain in remarks)

Soils

Depth (in.)	Hor.	Matrix Color	Mottle / 2nd Mottle Color	Abundance	Contrast	Texture, Structure, etc.
0-16	A	10YR 3/2				Sandy Clay Loam Medium Subangular Blocky

Hydric Soils Indicators
- [ ] Histosol
- [ ] Histic Epipedon
- [ ] Sulfidic Odor
- [ ] Probable Aquatic Moist Regime
- [ ] Reducing Conditions
- [ ] Gleyed or Low-Chroma Colors
- [ ] Concretions
- [ ] High Organic % in Surface Layer
- [ ] Organic Streaking
- [ ] Listed on Local Hydric Soils List
- [ ] Listed on National Hydric Soils List
- [ ] Other (explain in remarks)

Unit Name: **C3r Corvallis silt loam poorly drained var.** Taxonomy: **Typic Haplaquolls**
Drainage Class: **Very poorly drained**
[X] Field Observations match map

Remarks

Wetland Determination

- [ ] Hydrophytic Vegetation Present
- [ ] Hydric Soils Present
- [ ] Wetland Hydrology Present
- [ ] This Data Point is a Wetland

Remarks

Job Number: **0877.008.010.0310**
City: **Hamilton**
Wetland Data Point: **W-7-03-wl.**

Data Form
Routine Wetland Determination

Project/Site: **Ravalli Co. Airport**
Applicant/Owner: **Ravalli County**
Investigator: **SR/EN**
[X] Do normal circumstances exist on the site?
[ ] Have vegetation, soils, or hydrology been disturbed?
[ ] Is the area a potential problem area?

Date: **October 28, 2004**
County: **Ravalli**
State: **MT**
Community ID: **Wetland**
Station ID: **S-7-03**
Plot ID: **1**

Vegetation

Dominant	Species	Common Name	% Cover	Indicator
Herbaceous				
	Rumex crispus	Dock,Curly		FAC+
	Deschampsia cespitosa	Hairgrass,Tufted		FACW
	Poa palustris	Bluegrass,Fowl		FAC
	Equisetum laevigatum	Scouring-Rush,Smooth		FACW

% Species that are OBL, FACW, or FAC (except FAC-): Cowardin Classification:
Remarks: Greater than 50% FAC or wetter

Hydrology

[ ] Recorded Data (describe in remarks)
- [ ] Stream, Lake, or Tide Gage
- [ ] Aerial Photograph
- [ ] Other (describe in remarks)

Field Observations:
- Depth of Surface Water(in.): **0**
- Depth to Free Water in Pit(in.): **>16**
- Depth to Saturated Soils(in.): **>16**

Remarks

Primary Wetland Hydrology Indicators
- [ ] Inundated
- [ ] Saturated in upper 12 inches
- [ ] Water marks
- [ ] Drift lines
- [ ] Sediment deposits
- [X] Drainage patterns in wetlands

Secondary Hydrology Indicators
- [ ] Oxidized root channels
- [ ] Water-stained leaves
- [ ] Local soil survey data
- [X] FAC-Neutral test
- [ ] Other (explain in remarks)

Soils

Depth (in.)	Hor.	Matrix Color	Mottle / 2nd Mottle Color	Abundance	Contrast	Texture, Structure, etc.
0-16	A	10YR 2/1				Sandy Clay Loam Fine Subangular Blocky

Hydric Soils Indicators
- [ ] Histosol
- [ ] Histic Epipedon
- [X] Sulfidic Odor
- [ ] Probable Aquatic Moist Regime
- [ ] Reducing Conditions
- [X] Gleyed or Low-Chroma Colors
- [ ] Concretions
- [ ] High Organic % in Surface Layer
- [ ] Organic Streaking
- [ ] Listed on Local Hydric Soils List
- [ ] Listed on National Hydric Soils List
- [ ] Other (explain in remarks)

Unit Name: **C3r Corvallis silt loam poorly drained var.** Taxonomy: **Typic Haplaquolls**
Drainage Class: **Very poorly drained** [ ] Field Observations match map

Remarks

Wetland Determination

- [X] Hydrophytic Vegetation Present
- [X] Hydric Soils Present
- [X] Wetland Hydrology Present

[X] This Data Point is a Wetland

Remarks

Data Form
Routine Wetland Determination

Job Number: **0877.008.010.0310**
City: **Hamilton**
Wetland Data Point: **W-7-03-upl.**

Project/Site: **Ravalli Co. Airport**
Applicant/Owner: **Ravalli County**
Investigator: **SR/EN**
[X] Do normal circumstances exist on the site?
[ ] Have vegetation, soils, or hydrology been disturbed?
[ ] Is the area a potential problem area?

Date: **October 28, 2004**
County: **Ravalli**
State: **MT**
Community ID: **Upland**
Station ID: **S-7-03**
Plot ID: **2**

Vegetation

Dominant Species	Common Name	% Cover	Indicator
Herbaceous			
Agropyron smithii	Wheatgrass,Western		FACU
Aster spp.	Aster spp.		NI, OBL-UPL
Equisetum laevigatum	Scouring-Rush,Smooth		FACW
Cirsium arvense	Thistle,Creeping		FACU+
Shrub			
Symphoricarpos albus	Snowberry		FACU

% Species that are OBL, FACW, or FAC (except FAC-):
Cowardin Classification:
Remarks: Less than 50% FAC or wetter

Hydrology

[ ] Recorded Data (describe in remarks)
- [ ] Stream, Lake, or Tide Gage
- [ ] Aerial Photograph
- [ ] Other (describe in remarks)

Field Observations:
- Depth of Surface Water(in.): **0**
- Depth to Free Water in Pit(in.): **>16**
- Depth to Saturated Soils(in.): **>16**

Remarks

Primary Wetland Hydrology Indicators
- [ ] Inundated
- [ ] Saturated in upper 12 inches
- [ ] Water marks
- [ ] Drift lines
- [ ] Sediment deposits
- [ ] Drainage patterns in wetlands

Secondary Hydrology Indicators
- [ ] Oxidized root channels
- [ ] Water-stained leaves
- [ ] Local soil survey data
- [ ] FAC-Neutral test
- [ ] Other (explain in remarks)

Soils

Depth (in.)	Hor.	Matrix Color	Mottle / 2nd Mottle Color	Abundance	Contrast	Texture, Structure, etc.
0-16	A	10YR 3/2				Sandy Clay Loam Coarse Subangular Blocky

Hydric Soils Indicators
- [ ] Histosol
- [ ] Histic Epipedon
- [ ] Sulfidic Odor
- [ ] Probable Aquatic Moist Regime
- [ ] Reducing Conditions
- [ ] Gleyed or Low-Chroma Colors
- [ ] Concretions
- [ ] High Organic % in Surface Layer
- [ ] Organic Streaking
- [ ] Listed on Local Hydric Soils List
- [ ] Listed on National Hydric Soils List
- [ ] Other (explain in remarks)

Unit Name: **C3s Corvallis silt loam slightly saline**
Drainage Class: **Somewhat poorly drained**
Taxonomy: **Fluvauqentic Haploborolls**
[ ] Field Observations match map

Remarks

Wetland Determination

- [ ] Hydrophytic Vegetation Present
- [ ] Hydric Soils Present
- [ ] Wetland Hydrology Present
- [ ] This Data Point is a Wetland

Remarks

Data Form
Routine Wetland Determination

Job Number: **0877.008.010.0310**
City: **Hamilton**
Wetland Data Point: **W-8-03-wl.**

Project/Site: **Ravalli Co. Airport**
Applicant/Owner: **Ravalli County**
Investigator: **SR/EN**
[X] Do normal circumstances exist on the site?
[ ] Have vegetation, soils, or hydrology been disturbed?
[ ] Is the area a potential problem area?

Date: **October 28, 2004**
County: **Ravalli**
State: **MT**
Community ID: **Wetland**
Station ID: **S-8-03**
Plot ID: **1**

Vegetation

Dominant	Species	Common Name	% Cover	Indicator
Herbaceous				
	Carex nebrascensis	Sedge,Nebraska		OBL
	Plantago spp.	Plantain		OBL-UPL
	Epilobium ciliatum	Willow-Herb,Hairy		FACW-
	Phleum pratense	Timothy		FAC-
	Cirsium arvense	Thistle,Creeping		FACU+
	Deschampsia cespitosa	Hairgrass,Tufted		FACW
	Glyceria grandis	Grass,American Manna		No status
	Veronica americana	Speedwell,American		OBL

% Species that are OBL, FACW, or FAC (except FAC-):
Cowardin Classification:
Remarks: Greater than 50% FAC or wetter

Hydrology

[ ] Recorded Data (describe in remarks)
- [ ] Stream, Lake, or Tide Gage
- [ ] Aerial Photograph
- [ ] Other (describe in remarks)

Field Observations:
- Depth of Surface Water(in.): **0**
- Depth to Free Water in Pit(in.): **4**
- Depth to Saturated Soils(in.): **0**

Remarks

Primary Wetland Hydrology Indicators
- [X] Inundated
- [X] Saturated in upper 12 inches
- [ ] Water marks
- [ ] Drift lines
- [ ] Sediment deposits
- [X] Drainage patterns in wetlands

Secondary Hydrology Indicators
- [ ] Oxidized root channels
- [ ] Water-stained leaves
- [ ] Local soil survey data
- [X] FAC-Neutral test
- [ ] Other (explain in remarks)

Soils

Depth (in.)	Hor.	Matrix Color	Mottle / 2nd Mottle Color	Abundance	Contrast	Texture, Structure, etc.
0-10	A	10YR 2/1				Sandy Loam Fine Subangular Blocky

Hydric Soils Indicators
- [ ] Histosol
- [ ] Histic Epipedon
- [X] Sulfidic Odor
- [ ] Probable Aquatic Moist Regime
- [ ] Reducing Conditions
- [X] Gleyed or Low-Chroma Colors
- [ ] Concretions
- [ ] High Organic % in Surface Layer
- [ ] Organic Streaking
- [ ] Listed on Local Hydric Soils List
- [ ] Listed on National Hydric Soils List
- [ ] Other (explain in remarks)

Unit Name: **C3s Corvallis silt loam slightly saline**
Drainage Class: **Somewhat poorly drained**
Taxonomy: **Fluvaquentic Haploborolls**
[ ] Field Observations match map

Remarks
10+ inches is rock

Wetland Determination

- [X] Hydrophytic Vegetation Present
- [X] Hydric Soils Present
- [X] Wetland Hydrology Present

[X] This Data Point is a Wetland

Remarks
Share upland data point with W-5-03-upl.

Data Form
Routine Wetland Determination

Job Number: **0877.008.010.0310**
City: **Hamilton**
Wetland Data Point: **W-8-03-upl.**

Project/Site: **Ravalli Co. Airport**
Applicant/Owner: **Ravalli County**
Investigator: **SR/EN**
[X] Do normal circumstances exist on the site?
[ ] Have vegetation, soils, or hydrology been disturbed?
[ ] Is the area a potential problem area?

Date: **October 28, 2004**
County: **Ravalli**
State: **MT**
Community ID: **Upland**
Station ID: **S-8-03**
Plot ID: **2**

Vegetation

Dominant Species	Common Name	% Cover	Indicator
Herbaceous			
Trifolium spp.	Clover spp.		NI, FACW+-UPL
Centaurea maculosa	Knapweed, Spotted		No Status
Phleum pratense	Timothy		FAC-
Cirsium arvense	Thistle,Creeping		FACU+

% Species that are OBL, FACW, or FAC (except FAC-):
Cowardin Classification:
Remarks: Less than 50% FAC or wetter

Hydrology

[ ] Recorded Data (describe in remarks)
- [ ] Stream, Lake, or Tide Gage
- [ ] Aerial Photograph
- [ ] Other (describe in remarks)

Field Observations:
- Depth of Surface Water(in.): **0**
- Depth to Free Water in Pit(in.): **>16**
- Depth to Saturated Soils(in.): **>16**

Remarks

Primary Wetland Hydrology Indicators
- [ ] Inundated
- [ ] Saturated in upper 12 inches
- [ ] Water marks
- [ ] Drift lines
- [ ] Sediment deposits
- [ ] Drainage patterns in wetlands

Secondary Hydrology Indicators
- [ ] Oxidized root channels
- [ ] Water-stained leaves
- [ ] Local soil survey data
- [ ] FAC-Neutral test
- [ ] Other (explain in remarks)

Soils

Depth (in.)	Hor.	Matrix Color	Mottle / 2nd Mottle Color	Abundance	Contrast	Texture, Structure, etc.
0-16	A	10YR 3/2				Sandy Loam Medium Subangular Blocky

Hydric Soils Indicators
- [ ] Histosol
- [ ] Histic Epipedon
- [ ] Sulfidic Odor
- [ ] Probable Aquatic Moist Regime
- [ ] Reducing Conditions
- [ ] Gleyed or Low-Chroma Colors
- [ ] Concretions
- [ ] High Organic % in Surface Layer
- [ ] Organic Streaking
- [ ] Listed on Local Hydric Soils List
- [ ] Listed on National Hydric Soils List
- [ ] Other (explain in remarks)

Unit Name: **C3s Corvallis silt loam slightly saline**
Drainage Class: **Somewhat poorly drained**
Taxonomy: **Fluvauqentic Haploborolls**
[ ] Field Observations match map

Remarks

Wetland Determination

- [ ] Hydrophytic Vegetation Present
- [ ] Hydric Soils Present
- [ ] Wetland Hydrology Present

[ ] This Data Point is a Wetland

Remarks

Data Form
Routine Wetland Determination

Job Number: **0877.008.010.0310**
City: **Hamilton**
Wetland Data Point: **W-9-03-wl.**

Project/Site: **Ravalli Co. Airport**
Applicant/Owner: **Ravalli County**
Investigator: **SR/EN**
[X] Do normal circumstances exist on the site?
[ ] Have vegetation, soils, or hydrology been disturbed?
[ ] Is the area a potential problem area?

Date: **October 28, 2004**
County: **Ravalli**
State: **MT**
Community ID: **Wetland**
Station ID: **S-9-03**
Plot ID: **1**

Vegetation

Dominant	Species	Common Name	% Cover	Indicator
Herbaceous				
	Phleum alpinum	Timothy,Alpine		FACW
	Deschampsia cespitosa	Hairgrass,Tufted		FACW
	Juncus balticus	Rush,Baltic		FACW+
	Equisetum laevigatum	Scouring-Rush,Smooth		FACW

% Species that are OBL, FACW, or FAC (except FAC-):
Cowardin Classification:
Remarks: Greater than 50% FAC or wetter

Hydrology

[ ] Recorded Data (describe in remarks)
- [ ] Stream, Lake, or Tide Gage
- [ ] Aerial Photograph
- [ ] Other (describe in remarks)

Field Observations:
- Depth of Surface Water(in.): **0**
- Depth to Free Water in Pit(in.): **>16**
- Depth to Saturated Soils(in.): **>16**

Remarks

Primary Wetland Hydrology Indicators
- [ ] Inundated
- [ ] Saturated in upper 12 inches
- [ ] Water marks
- [ ] Drift lines
- [ ] Sediment deposits
- [X] Drainage patterns in wetlands

Secondary Hydrology Indicators
- [ ] Oxidized root channels
- [ ] Water-stained leaves
- [ ] Local soil survey data
- [X] FAC-Neutral test
- [ ] Other (explain in remarks)

Soils

Depth (in.)	Hor.	Matrix Color	Mottle / 2nd Mottle Color	Abundance	Contrast	Texture, Structure, etc.
0-16	A	10YR 3/1				Sandy Clay Loam Fine Subangular Blocky

Hydric Soils Indicators
- [ ] Histosol
- [ ] Histic Epipedon
- [ ] Sulfidic Odor
- [ ] Probable Aquatic Moist Regime
- [ ] Reducing Conditions
- [X] Gleyed or Low-Chroma Colors
- [ ] Concretions
- [ ] High Organic % in Surface Layer
- [ ] Organic Streaking
- [ ] Listed on Local Hydric Soils List
- [ ] Listed on National Hydric Soils List
- [ ] Other (explain in remarks)

Unit Name: **C3s Corvallis silt loam slightly saline**
Drainage Class: **Somewhat poorly drained**
Taxonomy: **Fluvauqentic Haploborolls**
[ ] Field Observations match map

Remarks

Wetland Determination

[X] Hydrophytic Vegetation Present
[X] Hydric Soils Present
[X] Wetland Hydrology Present
Remarks

[X] This Data Point is a Wetland

Data Form
Routine Wetland Determination

Job Number: **0877.008.010.0310**
City: **Hamilton**
Wetland Data Point: **W-9-03-upl.**

Project/Site: **Ravalli Co. Airport**
Applicant/Owner: **Ravalli County**
Investigator: **SR/EN**
[X] Do normal circumstances exist on the site?
[ ] Have vegetation, soils, or hydrology been disturbed?
[ ] Is the area a potential problem area?

Date: **October 28, 2004**
County: **Ravalli**
State: **MT**
Community ID: **Upland**
Station ID: **S-9-03**
Plot ID: **2**

Vegetation

Dominant Species	Common Name	% Cover	Indicator
Herbaceous			
Trifolium spp.	Clover spp.		NI, FACW+-UPL
Medicago sativa	Alfalfa		No status
Deschampsia cespitosa	Hairgrass,Tufted		FACW
Dactylis glomerata	Grass,Orchard		FACU

% Species that are OBL, FACW, or FAC (except FAC-): Cowardin Classification:
Remarks: Less than 50% FAC or wetter

Hydrology

[ ] Recorded Data (describe in remarks)
- [ ] Stream, Lake, or Tide Gage
- [ ] Aerial Photograph
- [ ] Other (describe in remarks)

Field Observations:
- Depth of Surface Water(in.): **0**
- Depth to Free Water in Pit(in.): **>16**
- Depth to Saturated Soils(in.): **>16**

Remarks

Primary Wetland Hydrology Indicators
- [ ] Inundated
- [ ] Saturated in upper 12 inches
- [ ] Water marks
- [ ] Drift lines
- [ ] Sediment deposits
- [ ] Drainage patterns in wetlands

Secondary Hydrology Indicators
- [ ] Oxidized root channels
- [ ] Water-stained leaves
- [ ] Local soil survey data
- [ ] FAC-Neutral test
- [ ] Other (explain in remarks)

Soils

Depth (in.)	Hor.	Matrix Color	Mottle / 2nd Mottle Color	Abundance	Contrast	Texture, Structure, etc.
0-16	A	10YR 4/1				Sandy Clay Loam Fine Subangular Blocky

Hydric Soils Indicators
- [ ] Histosol
- [ ] Histic Epipedon
- [ ] Sulfidic Odor
- [ ] Probable Aquatic Moist Regime
- [ ] Reducing Conditions
- [X] Gleyed or Low-Chroma Colors
- [ ] Concretions
- [ ] High Organic % in Surface Layer
- [ ] Organic Streaking
- [ ] Listed on Local Hydric Soils List
- [ ] Listed on National Hydric Soils List
- [ ] Other (explain in remarks)

Unit Name: **C3s Corvallis silt loam slightly saline**
Drainage Class: **Somewhat poorly drained**
Taxonomy: **Fluvauqentic Haploborolls**
[ ] Field Observations match map

Remarks

Wetland Determination

- [ ] Hydrophytic Vegetation Present
- [X] Hydric Soils Present
- [ ] Wetland Hydrology Present

[ ] This Data Point is a Wetland

Remarks

Data Form
Routine Wetland Determination

Job Number: **0877.008.010.0310**
City: **Hamilton**
Wetland Data Point: **W-10-03-wl.**

Project/Site: **Ravalli Co. Airport**
Applicant/Owner: **Ravalli County**
Investigator: **SR/EN**
[X] Do normal circumstances exist on the site?
[ ] Have vegetation, soils, or hydrology been disturbed?
[ ] Is the area a potential problem area?

Date: **October 28, 2004**
County: **Ravalli**
State: **MT**
Community ID: **Wetland**
Station ID: **S-10-03**
Plot ID: **1**

Vegetation

Dominant	Species	Common Name	% Cover	Indicator
Herbaceous				
	Juncus balticus	Rush,Baltic		FACW+
	Carex nebrascensis	Sedge,Nebraska		OBL
	Rumex crispus	Dock,Curly		FAC+
	Deschampsia cespitosa	Hairgrass,Tufted		FACW
	Juncus tenuis	Rush,Slender		FACW-

% Species that are OBL, FACW, or FAC (except FAC-):
Cowardin Classification:
Remarks: Greater than 50% FAC or wetter

Hydrology

[ ] Recorded Data (describe in remarks)
- [ ] Stream, Lake, or Tide Gage
- [ ] Aerial Photograph
- [ ] Other (describe in remarks)

Field Observations:
- Depth of Surface Water(in.): **0**
- Depth to Free Water in Pit(in.): **>16**
- Depth to Saturated Soils(in.): **>16**

Remarks

Primary Wetland Hydrology Indicators
- [ ] Inundated
- [ ] Saturated in upper 12 inches
- [ ] Water marks
- [ ] Drift lines
- [ ] Sediment deposits
- [X] Drainage patterns in wetlands

Secondary Hydrology Indicators
- [ ] Oxidized root channels
- [ ] Water-stained leaves
- [ ] Local soil survey data
- [X] FAC-Neutral test
- [ ] Other (explain in remarks)

Soils

Depth (in.)	Hor.	Matrix Color	Mottle / 2nd Mottle Color	Abundance	Contrast	Texture, Structure, etc.
0-12	A	10YR 2/1				Sandy Clay Loam Medium Subangular Blocky

Hydric Soils Indicators
- [ ] Histosol
- [ ] Histic Epipedon
- [ ] Sulfidic Odor
- [ ] Probable Aquatic Moist Regime
- [ ] Reducing Conditions
- [X] Gleyed or Low-Chroma Colors
- [ ] Concretions
- [ ] High Organic % in Surface Layer
- [ ] Organic Streaking
- [ ] Listed on Local Hydric Soils List
- [ ] Listed on National Hydric Soils List
- [ ] Other (explain in remarks)

Unit Name:**C3v Corvallis silt loam mod shallow slight saline** Taxonomy: **Fluvaquentic Haploborolls**
Drainage Class: **Slightly poorly drained**
[ ] Field Observations match map

Remarks

Wetland Determination

- [X] Hydrophytic Vegetation Present
- [X] Hydric Soils Present
- [X] Wetland Hydrology Present

Remarks

[X] This Data Point is a Wetland

Data Form
Routine Wetland Determination

Job Number: **0877.008.010.0310**
City: **Hamilton**
Wetland Data Point: **W-10-03-upl.**

Project/Site: **Ravalli Co. Airport**
Applicant/Owner: **Ravalli County**
Investigator: **SR/EN**
[X] Do normal circumstances exist on the site?
[ ] Have vegetation, soils, or hydrology been disturbed?
[ ] Is the area a potential problem area?

Date: **October 28, 2004**
County: **Ravalli**
State: **MT**
Community ID: **Upland**
Station ID: **S-10-03**
Plot ID: **2**

Vegetation

Dominant	Species	Common Name	% Cover	Indicator
Herbaceous				
	Poa palustris	Bluegrass,Fowl		FAC
	Phleum pratense	Timothy		FAC-
	Sisymbrium altissimum	Mustard,Tall Tumble		FACU-
	Cirsium arvense	Thistle,Creeping		FACU+

% Species that are OBL, FACW, or FAC (except FAC-):
Cowardin Classification:
Remarks: Less than 50% FAC or wetter

Hydrology

[ ] Recorded Data (describe in remarks)
- [ ] Stream, Lake, or Tide Gage
- [ ] Aerial Photograph
- [ ] Other (describe in remarks)

Field Observations:
- Depth of Surface Water(in.): **0**
- Depth to Free Water in Pit(in.): **>16**
- Depth to Saturated Soils(in.): **>16**

Remarks

Primary Wetland Hydrology Indicators
- [ ] Inundated
- [ ] Saturated in upper 12 inches
- [ ] Water marks
- [ ] Drift lines
- [ ] Sediment deposits
- [ ] Drainage patterns in wetlands

Secondary Hydrology Indicators
- [ ] Oxidized root channels
- [ ] Water-stained leaves
- [ ] Local soil survey data
- [ ] FAC-Neutral test
- [ ] Other (explain in remarks)

Soils

Depth (in.)	Hor.	Matrix Color	Mottle / 2nd Mottle Color	Abundance	Contrast	Texture, Structure, etc.
0-12	A	2.5Y 3/2				Sandy Clay Loam Medium Subangular Blocky
12-16	A	2.5Y 4/3				Sandy Clay Loam Medium Subangular Blocky

Hydric Soils Indicators
- [ ] Histosol
- [ ] Histic Epipedon
- [ ] Sulfidic Odor
- [ ] Probable Aquatic Moist Regime
- [ ] Reducing Conditions
- [ ] Gleyed or Low-Chroma Colors
- [ ] Concretions
- [ ] High Organic % in Surface Layer
- [ ] Organic Streaking
- [ ] Listed on Local Hydric Soils List
- [ ] Listed on National Hydric Soils List
- [ ] Other (explain in remarks)

Unit Name: **C3s Corvallis silt loam slightly saline**
Drainage Class: **Somewhat poorly drained**
Taxonomy: **Fluvaquentic Haploborolls**
[ ] Field Observations match map

Remarks

Wetland Determination

- [ ] Hydrophytic Vegetation Present
- [ ] Hydric Soils Present
- [ ] Wetland Hydrology Present
- [ ] This Data Point is a Wetland

Remarks

Data Form
Routine Wetland Determination

Job Number: **0877.008.010.0310**
City: **Hamilton**
Wetland Data Point: **W-11-03-wl.**

Project/Site: **Ravalli Co. Airport**
Applicant/Owner: **Ravalli County**
Investigator: **SR/EN**
[X] Do normal circumstances exist on the site?
[ ] Have vegetation, soils, or hydrology been disturbed?
[ ] Is the area a potential problem area?

Date: **October 28, 2004**
County: **Ravalli**
State: **MT**
Community ID: **Wetland**
Station ID: **S-11-03**
Plot ID: **1**

Vegetation

Dominant Species	Common Name	% Cover	Indicator
Herbaceous			
Solanum dulcamara	Nightshade,Climbing		FAC+
Conium Maculatum	Poison-Hemlock		FAC+
Cirsium arvense	Thistle,Creeping		FACU+
Mentha arvensis	Mint,Field		FACW-
Glyceria grandis	Grass,American Manna		No status
Phalaris arundinacea	Grass,Reed Canary		FACW
Typha latifolia	Cattail,Broad-Leaf		OBL

% Species that are OBL, FACW, or FAC (except FAC-):
Cowardin Classification:
Remarks: Greater than 50% FAC or wetter

Hydrology

[ ] Recorded Data (describe in remarks)
- [ ] Stream, Lake, or Tide Gage
- [ ] Aerial Photograph
- [ ] Other (describe in remarks)

Field Observations:
- Depth of Surface Water(in.): **6**
- Depth to Free Water in Pit(in.): **0**
- Depth to Saturated Soils(in.): **0**

Remarks

Primary Wetland Hydrology Indicators
- [X] Inundated
- [X] Saturated in upper 12 inches
- [ ] Water marks
- [ ] Drift lines
- [ ] Sediment deposits
- [ ] Drainage patterns in wetlands

Secondary Hydrology Indicators
- [ ] Oxidized root channels
- [ ] Water-stained leaves
- [ ] Local soil survey data
- [X] FAC-Neutral test
- [ ] Other (explain in remarks)

Soils

Depth (in.)	Hor.	Matrix Color	Mottle / 2nd Mottle Color	Abundance	Contrast	Texture, Structure, etc.
0-8	A	10YR 2/1				Sandy Loam Fine Subangular Blocky

Hydric Soils Indicators
- [ ] Histosol
- [ ] Histic Epipedon
- [ ] Sulfidic Odor
- [ ] Probable Aquatic Moist Regime
- [ ] Reducing Conditions
- [X] Gleyed or Low-Chroma Colors
- [ ] Concretions
- [ ] High Organic % in Surface Layer
- [ ] Organic Streaking
- [ ] Listed on Local Hydric Soils List
- [ ] Listed on National Hydric Soils List
- [ ] Other (explain in remarks)

Unit Name: **G2n Grantsdale Loam, level**
Drainage Class: **Well Drained**
Taxonomy: **Calciorthidic Haploxerolls**
[ ] Field Observations match map

Remarks
8+ inches was rock/gravel

Wetland Determination

- [X] Hydrophytic Vegetation Present
- [X] Hydric Soils Present
- [X] Wetland Hydrology Present

[X] This Data Point is a Wetland

Remarks

Data Form
Routine Wetland Determination

Job Number: **0877.008.010.0310**
City: **Hamilton**
Wetland Data Point: **W-11-03-upl.**

Project/Site: **Ravalli Co. Airport**
Applicant/Owner: **Ravalli County**
Investigator: **SR/EN**
[X] Do normal circumstances exist on the site?
[ ] Have vegetation, soils, or hydrology been disturbed?
[ ] Is the area a potential problem area?

Date: **October 28, 2004**
County: **Ravalli**
State: **MT**
Community ID: **Upland**
Station ID: **S-11-03**
Plot ID: **2**

Vegetation

Dominant Species	Common Name	% Cover	Indicator
Herbaceous			
Rosa woodsii	Wood's rose		FACU
Geranium richardsonii	Crane's-Bill,Richardson's		FAC-
Dactylis glomerata	Grass,Orchard		FACU
Shrub			
Symphoricarpos albus	Snowberry		FACU

% Species that are OBL, FACW, or FAC (except FAC-):
Cowardin Classification:
Remarks: Less than 50% FAC or wetter

Hydrology

[ ] Recorded Data (describe in remarks)
- [ ] Stream, Lake, or Tide Gage
- [ ] Aerial Photograph
- [ ] Other (describe in remarks)

Field Observations:
- Depth of Surface Water(in.): **0**
- Depth to Free Water in Pit(in.): **>16**
- Depth to Saturated Soils(in.): **>16**

Remarks

Primary Wetland Hydrology Indicators
- [ ] Inundated
- [ ] Saturated in upper 12 inches
- [ ] Water marks
- [ ] Drift lines
- [ ] Sediment deposits
- [ ] Drainage patterns in wetlands

Secondary Hydrology Indicators
- [ ] Oxidized root channels
- [ ] Water-stained leaves
- [ ] Local soil survey data
- [ ] FAC-Neutral test
- [ ] Other (explain in remarks)

Soils

Depth (in.)	Hor.	Matrix Color	Mottle / 2nd Mottle Color	Abundance	Contrast	Texture, Structure, etc.
0-14	A	10YR 3/3				Sandy Loam Fine Subangular Blocky

Hydric Soils Indicators
- [ ] Histosol
- [ ] Histic Epipedon
- [ ] Sulfidic Odor
- [ ] Probable Aquatic Moist Regime
- [ ] Reducing Conditions
- [ ] Gleyed or Low-Chroma Colors
- [ ] Concretions
- [ ] High Organic % in Surface Layer
- [ ] Organic Streaking
- [ ] Listed on Local Hydric Soils List
- [ ] Listed on National Hydric Soils List
- [ ] Other (explain in remarks)

Unit Name: **G2n Grantsdale loam, level**
Drainage Class: **Well Drained**
Taxonomy: **Calciorthidic Haploxerolls**
[ ] Field Observations match map

Remarks

Wetland Determination

- [ ] Hydrophytic Vegetation Present
- [ ] Hydric Soils Present
- [ ] Wetland Hydrology Present

[ ] This Data Point is a Wetland

Remarks

Data Form
Routine Wetland Determination

Job Number: **0877.008.010.0310**
City: **Hamilton**
Wetland Data Point: **W-12-03-wl.**

Project/Site: **Ravalli Co. Airport**
Applicant/Owner: **Ravalli County**
Investigator: **SR/EN**
[X] Do normal circumstances exist on the site?
[ ] Have vegetation, soils, or hydrology been disturbed?
[ ] Is the area a potential problem area?

Date: **October 28, 2004**
County: **Ravalli**
State: **MT**
Community ID: **Wetland**
Station ID: **S-12-03**
Plot ID: **1**

Vegetation

Dominant	Species	Common Name	% Cover	Indicator
Herbaceous				
	Cirsium arvense	Thistle,Creeping		FACU+
	Glyceria grandis	Grass,American Manna		No status
	Geum macrophyllum	Avens,Large-Leaf		FACW-
	Carex nebrascensis	Sedge,Nebraska		OBL
	Phalaris arundinacea	Grass,Reed Canary		FACW
	Ribes lacustre	Currant,Prickly		FAC+
Tree				
	Populus balsamifera	Poplar,Balsam		FAC

% Species that are OBL, FACW, or FAC (except FAC-):
Cowardin Classification:
Remarks: Greater than 50% FAC or wetter

Hydrology

[ ] Recorded Data (describe in remarks)
- [ ] Stream, Lake, or Tide Gage
- [ ] Aerial Photograph
- [ ] Other (describe in remarks)

Field Observations:
- Depth of Surface Water(in.): **4**
- Depth to Free Water in Pit(in.): **0**
- Depth to Saturated Soils(in.): **0**

Primary Wetland Hydrology Indicators
- [X] Inundated
- [X] Saturated in upper 12 inches
- [ ] Water marks
- [ ] Drift lines
- [ ] Sediment deposits
- [X] Drainage patterns in wetlands

Secondary Hydrology Indicators
- [ ] Oxidized root channels
- [ ] Water-stained leaves
- [ ] Local soil survey data
- [X] FAC-Neutral test
- [ ] Other (explain in remarks)

Remarks

Soils

Depth (in.)	Hor.	Matrix Color	Mottle / 2nd Mottle Color	Abundance	Contrast	Texture, Structure, etc.
0-16	A	10YR 3/1				Sandy Loam Fine Subangular Blocky

Hydric Soils Indicators
- [ ] Histosol
- [ ] Histic Epipedon
- [ ] Sulfidic Odor
- [ ] Probable Aquatic Moist Regime
- [ ] Reducing Conditions
- [X] Gleyed or Low-Chroma Colors
- [ ] Concretions
- [ ] High Organic % in Surface Layer
- [ ] Organic Streaking
- [ ] Listed on Local Hydric Soils List
- [ ] Listed on National Hydric Soils List
- [ ] Other (explain in remarks)

Unit Name: **C3s Corvallis silt loam slightly saline**
Drainage Class: **Somewhat poorly drained**
Taxonomy: **Fluvauqentic Haploborolls**
[ ] Field Observations match map

Remarks

Wetland Determination

- [X] Hydrophytic Vegetation Present
- [X] Hydric Soils Present
- [X] Wetland Hydrology Present

[X] This Data Point is a Wetland

Remarks

Data Form
Routine Wetland Determination

Job Number: **0877.008.010.0310**
City: **Hamilton**
Wetland Data Point: **W-12-03-upl.**

Project/Site: **Ravalli Co. Airport**
Applicant/Owner: **Ravalli County**
Investigator: **SR/EN**
[X] Do normal circumstances exist on the site?
[ ] Have vegetation, soils, or hydrology been disturbed?
[ ] Is the area a potential problem area?

Date: **October 28, 2004**
County: **Ravalli**
State: **MT**
Community ID: **Upland**
Station ID: **S-12-03**
Plot ID: **2**

Vegetation

Dominant	Species	Common Name	% Cover	Indicator
Herbaceous				
	Cirsium arvense	Thistle,Creeping		FACU+
	Centaurea maculosa	Knapweed, Spotted		No Status
	Senecio serra	Groundsel,Butterweed		FACU
	Cynoglossum officinale	Houndstongue		FACU

% Species that are OBL, FACW, or FAC (except FAC-):
Cowardin Classification:
Remarks: Less than 50% FAC or wetter

Hydrology

[ ] Recorded Data (describe in remarks)
- [ ] Stream, Lake, or Tide Gage
- [ ] Aerial Photograph
- [ ] Other (describe in remarks)

Field Observations:
- Depth of Surface Water(in.): **0**
- Depth to Free Water in Pit(in.): **>16**
- Depth to Saturated Soils(in.): **>16**

Remarks

Primary Wetland Hydrology Indicators
- [ ] Inundated
- [ ] Saturated in upper 12 inches
- [ ] Water marks
- [ ] Drift lines
- [ ] Sediment deposits
- [ ] Drainage patterns in wetlands

Secondary Hydrology Indicators
- [ ] Oxidized root channels
- [ ] Water-stained leaves
- [ ] Local soil survey data
- [ ] FAC-Neutral test
- [ ] Other (explain in remarks)

Soils

Depth (in.)	Hor.	Matrix Color	Mottle / 2nd Mottle Color	Abundance	Contrast	Texture, Structure, etc.
0-14	A	10YR 3/2				Sandy Loam Fine Subangular Blocky

Hydric Soils Indicators
- [ ] Histosol
- [ ] Histic Epipedon
- [ ] Sulfidic Odor
- [ ] Probable Aquatic Moist Regime
- [ ] Reducing Conditions
- [ ] Gleyed or Low-Chroma Colors
- [ ] Concretions
- [ ] High Organic % in Surface Layer
- [ ] Organic Streaking
- [ ] Listed on Local Hydric Soils List
- [ ] Listed on National Hydric Soils List
- [ ] Other (explain in remarks)

Unit Name: **C3s Corvallis silt loam slightly**
Drainage Class: **Somewhat poorly drained**
Taxonomy: **Fluvaquentic Haploborolls**
[ ] Field Observations match map

Remarks

Wetland Determination

- [ ] Hydrophytic Vegetation Present
- [ ] Hydric Soils Present
- [ ] Wetland Hydrology Present
- [ ] This Data Point is a Wetland

Remarks

Data Form
Routine Wetland Determination

Job Number: **0877.008.010.0310**
City: **Hamilton**
Wetland Data Point: **W-13-03-wl.**

Project/Site: **Ravalli Co. Airport**
Applicant/Owner: **Ravalli County**
Investigator: **SR/EN**
[X] Do normal circumstances exist on the site?
[ ] Have vegetation, soils, or hydrology been disturbed?
[ ] Is the area a potential problem area?

Date: **October 28, 2004**
County: **Ravalli**
State: **MT**
Community ID: **Wetland**
Station ID: **S-13-03**
Plot ID: **1**

Vegetation

Dominant	Species	Common Name	% Cover	Indicator
Herbaceous				
	Poa palustris	Bluegrass,Fowl		FAC
	Phalaris arundinacea	Grass,Reed Canary		FACW
	Deschampsia cespitosa	Hairgrass,Tufted		FACW
	Rumex crispus	Dock,Curly		FAC+
	Carex nebrascensis	Sedge,Nebraska		OBL
	Cirsium arvense	Thistle,Creeping		FACU+
Shrub				
	Salix spp.	Willow,spp.		NI, OBL-
	Rosa woodsii	Rose,Woods		FACU
Tree				
	Populus tremula	Aspen,Quaking		FAC+

% Species that are OBL, FACW, or FAC (except FAC-):
Cowardin Classification:
Remarks: Greater than 50% FAC or wetter

Hydrology

[ ] Recorded Data (describe in remarks)
- [ ] Stream, Lake, or Tide Gage
- [ ] Aerial Photograph
- [ ] Other (describe in remarks)

Field Observations:
- Depth of Surface Water(in.): **0**
- Depth to Free Water in Pit(in.): **>16**
- Depth to Saturated Soils(in.): **>16**

Primary Wetland Hydrology Indicators
- [ ] Inundated
- [ ] Saturated in upper 12 inches
- [ ] Water marks
- [ ] Drift lines
- [ ] Sediment deposits
- [X] Drainage patterns in wetlands

Secondary Hydrology Indicators
- [ ] Oxidized root channels
- [ ] Water-stained leaves
- [ ] Local soil survey data
- [X] FAC-Neutral test
- [ ] Other (explain in remarks)

Remarks

Soils

Depth (in.)	Hor.	Matrix Color	Mottle / 2nd Mottle Color	Abundance	Contrast	Texture, Structure, etc.
0-12	A	10YR 3/1				Clay Loam Medium Subangular Blocky

Hydric Soils Indicators
- [ ] Histosol
- [ ] Histic Epipedon
- [ ] Sulfidic Odor
- [ ] Probable Aquatic Moist Regime
- [ ] Reducing Conditions
- [X] Gleyed or Low-Chroma Colors
- [ ] Concretions
- [ ] High Organic % in Surface Layer
- [ ] Organic Streaking
- [ ] Listed on Local Hydric Soils List
- [ ] Listed on National Hydric Soils List
- [ ] Other (explain in remarks)

Unit Name: **C3s Corvallis silt loam slightly saline**
Drainage Class: **Somewhat poorly drained**
Taxonomy: **Fluvaquentic Haploborolls**
[ ] Field Observations match map

Remarks

Wetland Determination

- [X] Hydrophytic Vegetation Present
- [X] Hydric Soils Present
- [X] Wetland Hydrology Present

Remarks

[X] This Data Point is a Wetland

Data Form
Routine Wetland Determination

Job Number: **0877.008.010.0310**
City: **Hamilton**
Wetland Data Point: **W-13-03-upl.**

Project/Site: **Ravalli Co. Airport**
Applicant/Owner: **Ravalli County**
Investigator: **SR/EN**
[X] Do normal circumstances exist on the site?
[ ] Have vegetation, soils, or hydrology been disturbed?
[ ] Is the area a potential problem area?

Date: **October 28, 2004**
County: **Ravalli**
State: **MT**
Community ID: **Upland**
Station ID: **S-13-03**
Plot ID: **2**

Vegetation

Dominant Species	Common Name	% Cover	Indicator
Herbaceous			
Carduus nutans	Musk thistle		No status
Centaurea maculosa	Knapweed, Spotted		No Status
Cirsium arvense	Thistle,Creeping		FACU+
Tanacetum vulgare	Tansy,Common		NI
Shrub			
Symphoricarpos albus	Snowberry		FACU
Rosa woodsii	Rose,Woods		FACU

% Species that are OBL, FACW, or FAC (except FAC-):
Cowardin Classification:
Remarks: Less than 50% FAC or wetter

Hydrology

[ ] Recorded Data (describe in remarks)
- [ ] Stream, Lake, or Tide Gage
- [ ] Aerial Photograph
- [ ] Other (describe in remarks)

Field Observations:
- Depth of Surface Water(in.): **0**
- Depth to Free Water in Pit(in.): **>16**
- Depth to Saturated Soils(in.): **>16**

Remarks

Primary Wetland Hydrology Indicators
- [ ] Inundated
- [ ] Saturated in upper 12 inches
- [ ] Water marks
- [ ] Drift lines
- [ ] Sediment deposits
- [ ] Drainage patterns in wetlands

Secondary Hydrology Indicators
- [ ] Oxidized root channels
- [ ] Water-stained leaves
- [ ] Local soil survey data
- [ ] FAC-Neutral test
- [ ] Other (explain in remarks)

Soils

Depth (in.)	Hor.	Matrix Color	Mottle / 2nd Mottle Color	Abundance	Contrast	Texture, Structure, etc.
0-16	A	10YR 3/2				Sandy Clay Loam Medium Subangular Blocky

Hydric Soils Indicators
- [ ] Histosol
- [ ] Histic Epipedon
- [ ] Sulfidic Odor
- [ ] Probable Aquatic Moist Regime
- [ ] Reducing Conditions
- [ ] Gleyed or Low-Chroma Colors
- [ ] Concretions
- [ ] High Organic % in Surface Layer
- [ ] Organic Streaking
- [ ] Listed on Local Hydric Soils List
- [ ] Listed on National Hydric Soils List
- [ ] Other (explain in remarks)

Unit Name: **C3s Corvallis silt loam slightly**
Drainage Class: **Somewhat poorly drained**
Taxonomy: **Fluvaqentic Haploborolls**
[ ] Field Observations match map

Remarks

Wetland Determination

- [ ] Hydrophytic Vegetation Present
- [ ] Hydric Soils Present
- [ ] Wetland Hydrology Present
- [ ] This Data Point is a Wetland

Remarks

Data Form
Routine Wetland Determination

Job Number: **0877.008.010.0310**
City: **Hamilton**
Wetland Data Point: **W-14-03-wl.**

Project/Site: **Ravalli Co. Airport**
Applicant/Owner: **Ravalli County**
Investigator: **SR/EN**
[X] Do normal circumstances exist on the site?
[ ] Have vegetation, soils, or hydrology been disturbed?
[ ] Is the area a potential problem area?

Date: **October 28, 2004**
County: **Ravalli**
State: **MT**
Community ID: **Wetland**
Station ID: **S-14-03**
Plot ID: **1**

Vegetation

Dominant Species	Common Name	% Cover	Indicator
Herbaceous			
Phalaris arundinacea	Grass,Reed Canary		FACW
Tanacetum vulgare	Tansy,Common		NI
Senecio serra	Groundsel,Butterweed		FACU
Shrub			
Symphoricarpos albus	Snowberry		FACU

% Species that are OBL, FACW, or FAC (except FAC-): Cowardin Classification:
Remarks: Greater than 50% FAC or wetter

Hydrology

[ ] Recorded Data (describe in remarks)
- [ ] Stream, Lake, or Tide Gage
- [ ] Aerial Photograph
- [ ] Other (describe in remarks)

Field Observations:
- Depth of Surface Water(in.): **0**
- Depth to Free Water in Pit(in.): **>14**
- Depth to Saturated Soils(in.): **>14**

Remarks

Primary Wetland Hydrology Indicators
- [ ] Inundated
- [ ] Saturated in upper 12 inches
- [ ] Water marks
- [ ] Drift lines
- [ ] Sediment deposits
- [X] Drainage patterns in wetlands

Secondary Hydrology Indicators
- [ ] Oxidized root channels
- [ ] Water-stained leaves
- [ ] Local soil survey data
- [ ] FAC-Neutral test
- [ ] Other (explain in remarks)

Soils

Depth (in.)	Hor.	Matrix Color	Mottle / 2nd Mottle Color	Abundance	Contrast	Texture, Structure, etc.
0-14	A	10YR 3/1				Sandy Clay Loam Fine Subangular Blocky

Hydric Soils Indicators
- [ ] Histosol
- [ ] Histic Epipedon
- [ ] Sulfidic Odor
- [ ] Probable Aquatic Moist Regime
- [ ] Reducing Conditions
- [X] Gleyed or Low-Chroma Colors
- [ ] Concretions
- [ ] High Organic % in Surface Layer
- [ ] Organic Streaking
- [ ] Listed on Local Hydric Soils List
- [ ] Listed on National Hydric Soils List
- [ ] Other (explain in remarks)

Unit Name: **B3f Burnt Fork Loam, Level**
Drainage Class: **Well Drained**
Taxonomy: **Aridic Haploborolls**
[ ] Field Observations match map

Remarks

Wetland Determination

- [X] Hydrophytic Vegetation Present
- [X] Hydric Soils Present
- [X] Wetland Hydrology Present

Remarks

[X] This Data Point is a Wetland

Data Form
Routine Wetland Determination

Job Number: **0877.008.010.0310**
City: **Hamilton**
Wetland Data Point: **W-14-03-upl.**

Project/Site: **Ravalli Co. Airport**
Applicant/Owner: **Ravalli County**
Investigator: **SR/EN**
[X] Do normal circumstances exist on the site?
[ ] Have vegetation, soils, or hydrology been disturbed?
[ ] Is the area a potential problem area?

Date: **October 28, 2004**
County: **Ravalli**
State: **MT**
Community ID: **Upland**
Station ID: **S-14-03**
Plot ID: **2**

Vegetation

Dominant Species	Common Name	% Cover	Indicator
Herbaceous			
Tanacetum vulgare	Tansy,Common		NI
Senecio serra	Groundsel,Butterweed		FACU
Taraxacum officinale	Dandelion,Common		FACU
Festuca arundinacea	Fescue,Kentucky		FAC-
Medicago sativa	Alfalfa		
Shrub			
Symphoricarpos albus	Snowberry		FACU

% Species that are OBL, FACW, or FAC (except FAC-):
Cowardin Classification:
Remarks: Less than 50% FAC or wetter

Hydrology

[ ] Recorded Data (describe in remarks)
- [ ] Stream, Lake, or Tide Gage
- [ ] Aerial Photograph
- [ ] Other (describe in remarks)

Field Observations:
- Depth of Surface Water(in.): **0**
- Depth to Free Water in Pit(in.): **>16**
- Depth to Saturated Soils(in.): **>16**

Remarks

Primary Wetland Hydrology Indicators
- [ ] Inundated
- [ ] Saturated in upper 12 inches
- [ ] Water marks
- [ ] Drift lines
- [ ] Sediment deposits
- [ ] Drainage patterns in wetlands

Secondary Hydrology Indicators
- [ ] Oxidized root channels
- [ ] Water-stained leaves
- [ ] Local soil survey data
- [ ] FAC-Neutral test
- [ ] Other (explain in remarks)

Soils

Depth (in.)	Hor.	Matrix Color	Mottle / 2nd Mottle Color	Abundance	Contrast	Texture, Structure, etc.
0-16	A	10YR 3/2				Sandy Clay Loam Medium Subangular Blocky

Hydric Soils Indicators
- [ ] Histosol
- [ ] Histic Epipedon
- [ ] Sulfidic Odor
- [ ] Probable Aquatic Moist Regime
- [ ] Reducing Conditions
- [ ] Gleyed or Low-Chroma Colors
- [ ] Concretions
- [ ] High Organic % in Surface Layer
- [ ] Organic Streaking
- [ ] Listed on Local Hydric Soils List
- [ ] Listed on National Hydric Soils List
- [ ] Other (explain in remarks)

Unit Name: **B3f Burnt Fork Loam, Level**
Drainage Class: **Well Drained**
Taxonomy: **Aridic Haploborolls**
[ ] Field Observations match map

Remarks

Wetland Determination

- [ ] Hydrophytic Vegetation Present
- [ ] Hydric Soils Present
- [ ] Wetland Hydrology Present

[ ] This Data Point is a Wetland

Remarks

Data Form
Routine Wetland Determination

Job Number: **0877.008.010.0310**
City: **Hamilton**
Wetland Data Point: **W-15-04-wl.**

Project/Site: **Ravalli Co. Airport**
Applicant/Owner: **Ravalli County**
Investigator:
[X] Do normal circumstances exist on the site?
[ ] Have vegetation, soils, or hydrology been disturbed?
[ ] Is the area a potential problem area?

Date: **October 27, 2004**
County: **Ravalli**
State: **MT**
Community ID: **Wetland**
Station ID: **S-15-04**
Plot ID: **1**

Vegetation

Dominant Species	Common Name	% Cover	Indicator
Herbaceous			
Juncus balticus	Rush,Baltic		FACW+
Veronica americana	Speedwell,American		OBL
Conium maculatum	Poison-Hemlock		FAC+
Dactylis glomerata	Grass,Orchard		FACU
Tanacetum vulgare	Tansy,Common		NI
Equisetum arvense	Horsetail,Field		FAC
Rumex crispus	Dock,Curly		FAC+
Glyceria grandis	Grass,American Manna		No status
Carex rostrata	Sedge,Beaked		OBL

% Species that are OBL, FACW, or FAC (except FAC-):
Cowardin Classification:
Remarks: Greater than 50% FAC or wetter

Hydrology

[ ] Recorded Data (describe in remarks)
- [ ] Stream, Lake, or Tide Gage
- [ ] Aerial Photograph
- [ ] Other (describe in remarks)

Field Observations:
- Depth of Surface Water(in.): **0**
- Depth to Free Water in Pit(in.): **>16**
- Depth to Saturated Soils(in.): **>16**

Primary Wetland Hydrology Indicators
- [ ] Inundated
- [ ] Saturated in upper 12 inches
- [ ] Water marks
- [ ] Drift lines
- [ ] Sediment deposits
- [X] Drainage patterns in wetlands

Secondary Hydrology Indicators
- [ ] Oxidized root channels
- [ ] Water-stained leaves
- [ ] Local soil survey data
- [X] FAC-Neutral test
- [ ] Other (explain in remarks)

Remarks
Ditch

Soils

Depth (in.)	Hor.	Matrix Color	Mottle / 2nd Mottle Color	Abundance	Contrast	Texture, Structure, etc.
0-16	A	10YR 2/1				Sandy Loam Medium Subangular Blocky

Hydric Soils Indicators
- [ ] Histosol
- [ ] Histic Epipedon
- [ ] Sulfidic Odor
- [ ] Probable Aquatic Moist Regime
- [ ] Reducing Conditions
- [X] Gleyed or Low-Chroma Colors
- [ ] Concretions
- [ ] High Organic % in Surface Layer
- [ ] Organic Streaking
- [ ] Listed on Local Hydric Soils List
- [ ] Listed on National Hydric Soils List
- [ ] Other (explain in remarks)

Unit Name: **Rm Riverside cobbly sandy loam sloping**
Taxonomy: **Entic Haploborolls**
Drainage Class: **Excessively drained**
[ ] Field Observations match map

Remarks

Wetland Determination

- [X] Hydrophytic Vegetation Present
- [X] Hydric Soils Present
- [X] Wetland Hydrology Present

[X] This Data Point is a Wetland

Remarks

Data Form
Routine Wetland Determination

Job Number: **0877.008.010.0310**
City: **Hamilton**
Wetland Data Point: **W-15-04-upl.**

Project/Site: **Ravalli Co. Airport**
Applicant/Owner: **Ravalli County**
Investigator: **SR/EN**
[X] Do normal circumstances exist on the site?
[ ] Have vegetation, soils, or hydrology been disturbed?
[ ] Is the area a potential problem area?

Date: **October 27, 2004**
County: **Ravalli**
State: **MT**
Community ID: **Upland**
Station ID: **S-15-04**
Plot ID: **2**

Vegetation

Dominant Species	Common Name	% Cover	Indicator
Herbaceous			
Tanacetum vulgare	Tansy,Common		NI
Centaurea maculosa	Knapweed, Spotted		No Status
Dactylis glomerata	Grass,Orchard		FACU

% Species that are OBL, FACW, or FAC (except FAC-):
Cowardin Classification:
Remarks: Less than 50% FAC or wetter

Hydrology

[ ] Recorded Data (describe in remarks)
- [ ] Stream, Lake, or Tide Gage
- [ ] Aerial Photograph
- [ ] Other (describe in remarks)

Field Observations:
- Depth of Surface Water(in.): **0**
- Depth to Free Water in Pit(in.): **>16**
- Depth to Saturated Soils(in.): **>16**

Remarks

Primary Wetland Hydrology Indicators
- [ ] Inundated
- [ ] Saturated in upper 12 inches
- [ ] Water marks
- [ ] Drift lines
- [ ] Sediment deposits
- [ ] Drainage patterns in wetlands

Secondary Hydrology Indicators
- [ ] Oxidized root channels
- [ ] Water-stained leaves
- [ ] Local soil survey data
- [ ] FAC-Neutral test
- [ ] Other (explain in remarks)

Soils

Depth (in.)	Hor.	Matrix Color	Mottle / 2nd Mottle Color	Abundance	Contrast	Texture, Structure, etc.
0-16	A	10YR 3/2				Sandy Loam Coarse Subangular Blocky

Hydric Soils Indicators
- [ ] Histosol
- [ ] Histic Epipedon
- [ ] Sulfidic Odor
- [ ] Probable Aquatic Moist Regime
- [ ] Reducing Conditions
- [ ] Gleyed or Low-Chroma Colors
- [ ] Concretions
- [ ] High Organic % in Surface Layer
- [ ] Organic Streaking
- [ ] Listed on Local Hydric Soils List
- [ ] Listed on National Hydric Soils List
- [ ] Other (explain in remarks)

Unit Name: **Rm Riverside cobbly sandy loam sloping**
Taxonomy: **Entic Haploborolls**
Drainage Class: **Excessively drained**
[ ] Field Observations match map

Remarks

Wetland Determination

- [ ] Hydrophytic Vegetation Present
- [ ] Hydric Soils Present
- [ ] Wetland Hydrology Present
- [ ] This Data Point is a Wetland

Remarks

Data Form
Routine Wetland Determination

Job Number: **0877.008.010.0310**
City: **Hamilton**
Wetland Data Point: **W-16-04-wl.**

Project/Site: **Ravalli Co. Airport**
Applicant/Owner: **Ravalli County**
Investigator: **SR/EN**
[X] Do normal circumstances exist on the site?
[ ] Have vegetation, soils, or hydrology been disturbed?
[ ] Is the area a potential problem area?

Date: **October 27, 2004**
County: **Ravalli**
State: **MT**
Community ID: **Wetland**
Station ID: **S-16-04**
Plot ID: **1**

Vegetation

Dominant Species	Common Name	% Cover	Indicator
Herbaceous			
Typha angustifolia	Cattail,Narrow-Leaf		OBL
Equisetum laevigatum	Scouring-Rush,Smooth		FACW
Juncus balticus	Rush,Baltic		FACW+
Deschampsia cespitosa	Hairgrass,Tufted		FACW
Poa palustris	Bluegrass,Fowl		FAC
Carex nebrascensis	Sedge,Nebraska		OBL

% Species that are OBL, FACW, or FAC (except FAC-): Cowardin Classification:

Remarks: Greater than 50% FAC or wetter

Hydrology

[ ] Recorded Data (describe in remarks)
- [ ] Stream, Lake, or Tide Gage
- [ ] Aerial Photograph
- [ ] Other (describe in remarks)

Field Observations:
- Depth of Surface Water(in.): **0**
- Depth to Free Water in Pit(in.): **>16**
- Depth to Saturated Soils(in.): **10**

Remarks

Primary Wetland Hydrology Indicators
- [ ] Inundated
- [X] Saturated in upper 12 inches
- [ ] Water marks
- [ ] Drift lines
- [ ] Sediment deposits
- [ ] Drainage patterns in wetlands

Secondary Hydrology Indicators
- [X] Oxidized root channels
- [ ] Water-stained leaves
- [ ] Local soil survey data
- [X] FAC-Neutral test
- [ ] Other (explain in remarks)

Soils

Depth (in.)	Hor.	Matrix Color	Mottle / 2nd Mottle Color	Abundance	Contrast	Texture, Structure, etc.
0-16	A	10YR 3/1				Sandy Clay Loam Fine Subangular Blocky

Hydric Soils Indicators
- [ ] Histosol
- [ ] Histic Epipedon
- [ ] Sulfidic Odor
- [ ] Probable Aquatic Moist Regime
- [ ] Reducing Conditions
- [X] Gleyed or Low-Chroma Colors
- [ ] Concretions
- [ ] High Organic % in Surface Layer
- [ ] Organic Streaking
- [ ] Listed on Local Hydric Soils List
- [ ] Listed on National Hydric Soils List
- [ ] Other (explain in remarks)

Unit Name:**C3t Corvallis silt loam moderately saline**
Drainage Class: **Poorly drained**
Taxonomy: **Fluvaquentic Haploborolls**
[ ] Field Observations match map

Remarks

Wetland Determination

- [X] Hydrophytic Vegetation Present
- [X] Hydric Soils Present
- [X] Wetland Hydrology Present

[X] This Data Point is a Wetland

Remarks

Data Form
Routine Wetland Determination

Job Number: **0877.008.010.0310**
City: **Hamilton**
Wetland Data Point: **W-16-04-upl.**

Project/Site: **Ravalli Co. Airport**
Applicant/Owner: **Ravalli County**
Investigator: **SR/EN**
[X] Do normal circumstances exist on the site?
[ ] Have vegetation, soils, or hydrology been disturbed?
[ ] Is the area a potential problem area?

Date: **October 27, 2004**
County: **Ravalli**
State: **MT**
Community ID: **Upland**
Station ID: **S-16-04**
Plot ID: **2**

Vegetation

Dominant	Species	Common Name	% Cover	Indicator
Herbaceous				
	Sisymbrium altissimum	Tumble-mustard		NI
	Poa palustris	Bluegrass,Fowl		FAC
	Equisetum laevigatum	Scouring-Rush,Smooth		FACW
Shrub				
	Rosa woodsii	Rose,Woods		FACU

% Species that are OBL, FACW, or FAC (except FAC-):
Cowardin Classification:
Remarks: Less than 50% FAC or wetter

Hydrology

[ ] Recorded Data (describe in remarks)
- [ ] Stream, Lake, or Tide Gage
- [ ] Aerial Photograph
- [ ] Other (describe in remarks)

Field Observations:
- Depth of Surface Water(in.): **0**
- Depth to Free Water in Pit(in.): **>16**
- Depth to Saturated Soils(in.): **>16**

Primary Wetland Hydrology Indicators
- [ ] Inundated
- [ ] Saturated in upper 12 inches
- [ ] Water marks
- [ ] Drift lines
- [ ] Sediment deposits
- [ ] Drainage patterns in wetlands

Secondary Hydrology Indicators
- [ ] Oxidized root channels
- [ ] Water-stained leaves
- [ ] Local soil survey data
- [ ] FAC-Neutral test
- [ ] Other (explain in remarks)

Remarks

Soils

Depth (in.)	Hor.	Matrix Color	Mottle / 2nd Mottle Color	Abundance	Contrast	Texture, Structure, etc.
0-16	A	10YR 3/2				Sandy Clay Loam Medium Subangular Blocky

Hydric Soils Indicators
- [ ] Histosol
- [ ] Histic Epipedon
- [ ] Sulfidic Odor
- [ ] Probable Aquatic Moist Regime
- [ ] Reducing Conditions
- [ ] Gleyed or Low-Chroma Colors
- [ ] Concretions
- [ ] High Organic % in Surface Layer
- [ ] Organic Streaking
- [ ] Listed on Local Hydric Soils List
- [ ] Listed on National Hydric Soils List
- [ ] Other (explain in remarks)

Unit Name: **C3t Corvallis silt loam moderately saline**
Taxonomy: **Fluvaquentic Haploborolls**
Drainage Class: **Poorly drained**
[ ] Field Observations match map

Remarks

Wetland Determination

- [ ] Hydrophytic Vegetation Present
- [ ] Hydric Soils Present
- [ ] Wetland Hydrology Present

[ ] This Data Point is a Wetland

Remarks

Data Form
Routine Wetland Determination

Job Number: **0877.008.010.0310**
City: **Hamilton**
Wetland Data Point: **W-17-04-wl.**

Project/Site: **Ravalli Co. Airport**
Applicant/Owner: **Ravalli County**
Investigator: **SR/EN**
[X] Do normal circumstances exist on the site?
[ ] Have vegetation, soils, or hydrology been disturbed?
[ ] Is the area a potential problem area?

Date: **October 27, 2004**
County: **Ravalli**
State: **MT**
Community ID: **Wetland**
Station ID: **S-17-04**
Plot ID: **1**

Vegetation

Dominant	Species	Common Name	% Cover	Indicator
Herbaceous				
	Juncus balticus	Rush,Baltic		FACW+
	Carex microptera	Sedge,Small-Wing		FAC
	Deschampsia cespitosa	Hairgrass,Tufted		FACW
	Poa palustris	Bluegrass,Fowl		FAC
	Carex nebrascensis	Sedge,Nebraska		OBL

% Species that are OBL, FACW, or FAC (except FAC-):
Cowardin Classification:
Remarks: Greater than 50% FAC or wetter

Hydrology

[ ] Recorded Data (describe in remarks)
- [ ] Stream, Lake, or Tide Gage
- [ ] Aerial Photograph
- [ ] Other (describe in remarks)

Field Observations:
- Depth of Surface Water(in.): **0**
- Depth to Free Water in Pit(in.): **2**
- Depth to Saturated Soils(in.): **0**

Remarks

Primary Wetland Hydrology Indicators
- [ ] Inundated
- [X] Saturated in upper 12 inches
- [ ] Water marks
- [ ] Drift lines
- [ ] Sediment deposits
- [X] Drainage patterns in wetlands

Secondary Hydrology Indicators
- [ ] Oxidized root channels
- [ ] Water-stained leaves
- [ ] Local soil survey data
- [X] FAC-Neutral test
- [ ] Other (explain in remarks)

Soils

Depth (in.)	Hor.	Matrix Color	Mottle / 2nd Mottle Color	Abundance	Contrast	Texture, Structure, etc.
0-16	A	10YR 3/1				Fine Sandy Loam Fine Subangular Blocky

Hydric Soils Indicators
- [ ] Histosol
- [ ] Histic Epipedon
- [X] Sulfidic Odor
- [ ] Probable Aquatic Moist Regime
- [ ] Reducing Conditions
- [X] Gleyed or Low-Chroma Colors
- [ ] Concretions
- [ ] High Organic % in Surface Layer
- [ ] Organic Streaking
- [ ] Listed on Local Hydric Soils List
- [ ] Listed on National Hydric Soils List
- [ ] Other (explain in remarks)

Unit Name: **C3s Corvallis silt loam slightly saline**
Drainage Class: **Somewhat poorly drained**
Taxonomy: **Fluvaquentic Haploborolls**
[ ] Field Observations match map

Remarks

Wetland Determination

- [X] Hydrophytic Vegetation Present
- [X] Hydric Soils Present
- [X] Wetland Hydrology Present

Remarks

[X] This Data Point is a Wetland

Data Form
Routine Wetland Determination

Job Number: **0877.008.010.0310**
City: **Hamilton**
Wetland Data Point: **W-17-04-upl.**

Project/Site: **Ravalli Co. Airport**
Applicant/Owner: **Ravalli County**
Investigator: **SR/EN**
[X] Do normal circumstances exist on the site?
[ ] Have vegetation, soils, or hydrology been disturbed?
[ ] Is the area a potential problem area?

Date: **October 27, 2004**
County: **Ravalli**
State: **MT**
Community ID: **Upland**
Station ID: **S-17-04**
Plot ID: **2**

Vegetation

Dominant	Species	Common Name	% Cover	Indicator
Herbaceous				
	Onopordum acanthium	scotch thistle		No status
	Carduus nutans	musk thistle		No status
		unknown grass spp.		
	Lactuca serriola	Lettuce,Prickly		FACU
	Taraxacum officinale	Dandelion,Common		FACU
Shrub				
	Rosa woodsii	Rose,Woods		FACU

% Species that are OBL, FACW, or FAC (except FAC-):
Cowardin Classification:
Remarks: Less than 50% FAC or wetter

Hydrology

[ ] Recorded Data (describe in remarks)
- [ ] Stream, Lake, or Tide Gage
- [ ] Aerial Photograph
- [ ] Other (describe in remarks)

Field Observations:
- Depth of Surface Water(in.): **0**
- Depth to Free Water in Pit(in.): **>16**
- Depth to Saturated Soils(in.): **>16**

Remarks

Primary Wetland Hydrology Indicators
- [ ] Inundated
- [ ] Saturated in upper 12 inches
- [ ] Water marks
- [ ] Drift lines
- [ ] Sediment deposits
- [ ] Drainage patterns in wetlands

Secondary Hydrology Indicators
- [ ] Oxidized root channels
- [ ] Water-stained leaves
- [ ] Local soil survey data
- [ ] FAC-Neutral test
- [ ] Other (explain in remarks)

Soils

Depth (in.)	Hor.	Matrix Color	Mottle / 2nd Mottle Color	Abundance	Contrast	Texture, Structure, etc.
0-16	A	10YR 3/2				Sandy Loam Coarse Subangular Blocky

Hydric Soils Indicators
- [ ] Histosol
- [ ] Histic Epipedon
- [ ] Sulfidic Odor
- [ ] Probable Aquatic Moist Regime
- [ ] Reducing Conditions
- [ ] Gleyed or Low-Chroma Colors
- [ ] Concretions
- [ ] High Organic % in Surface Layer
- [ ] Organic Streaking
- [ ] Listed on Local Hydric Soils List
- [ ] Listed on National Hydric Soils List
- [ ] Other (explain in remarks)

Unit Name: **C3s Corvallis silt loam slightly**
Drainage Class: **Somewhat poorly drained**
Taxonomy: **Fluvauqentic Haploborolls**
[ ] Field Observations match map

Remarks

Wetland Determination

- [ ] Hydrophytic Vegetation Present
- [ ] Hydric Soils Present
- [ ] Wetland Hydrology Present

Remarks

[ ] This Data Point is a Wetland

Data Form
Routine Wetland Determination

Job Number: **0877.008.010.0310**
City: **Hamilton**
Wetland Data Point: **W-18-04-wl.**

Project/Site: **Ravalli Co. Airport**
Applicant/Owner: **Ravalli County**
Investigator: **SR/EN**
[X] Do normal circumstances exist on the site?
[ ] Have vegetation, soils, or hydrology been disturbed?
[ ] Is the area a potential problem area?

Date: **October 28, 2004**
County: **Ravalli**
State: **MT**
Community ID: **Wetland**
Station ID: **S-18-04**
Plot ID: **1**

Vegetation

Dominant	Species	Common Name	% Cover	Indicator
Herbaceous				
	Trifolium spp.	Clover spp.		NI, FACW+-UPL
	Deschampsia cespitosa	Hairgrass,Tufted		FACW
	Juncus balticus	Rush,Baltic		FACW+
	Equisetum laevigatum	Scouring-Rush,Smooth		FACW

% Species that are OBL, FACW, or FAC (except FAC-):
Cowardin Classification:
Remarks: Greater than 50% FAC or wetter

Hydrology

[ ] Recorded Data (describe in remarks)
- [ ] Stream, Lake, or Tide Gage
- [ ] Aerial Photograph
- [ ] Other (describe in remarks)

Field Observations:
- Depth of Surface Water(in.): **0**
- Depth to Free Water in Pit(in.): **>16**
- Depth to Saturated Soils(in.): **0**

Remarks

Primary Wetland Hydrology Indicators
- [ ] Inundated
- [X] Saturated in upper 12 inches
- [ ] Water marks
- [ ] Drift lines
- [ ] Sediment deposits
- [X] Drainage patterns in wetlands

Secondary Hydrology Indicators
- [ ] Oxidized root channels
- [ ] Water-stained leaves
- [ ] Local soil survey data
- [X] FAC-Neutral test
- [ ] Other (explain in remarks)

Soils

Depth (in.)	Hor.	Matrix Color	Mottle / 2nd Mottle Color	Abundance	Contrast	Texture, Structure, etc.
0-4	A	10YR 2/1				Sandy Clay Loam Medium Subangular Blocky
4-16	A	10YR 3/1				Sandy Loam Fine Subangular Blocky

Hydric Soils Indicators
- [ ] Histosol
- [ ] Histic Epipedon
- [ ] Sulfidic Odor
- [ ] Probable Aquatic Moist Regime
- [ ] Reducing Conditions
- [X] Gleyed or Low-Chroma Colors
- [ ] Concretions
- [ ] High Organic % in Surface Layer
- [X] Organic Streaking
- [ ] Listed on Local Hydric Soils List
- [ ] Listed on National Hydric Soils List
- [ ] Other (explain in remarks)

Unit Name: **C3s Corvallis silt loam slightly saline**
Drainage Class: **Somewhat poorly drained**
Taxonomy: **Fluvauqentic Haploborolls**
[ ] Field Observations match map

Remarks

Wetland Determination

- [X] Hydrophytic Vegetation Present
- [X] Hydric Soils Present
- [X] Wetland Hydrology Present

Remarks

- [X] This Data Point is a Wetland

Data Form
Routine Wetland Determination

Job Number: **0877.008.010.0310**
City: **Hamilton**
Wetland Data Point: **W-18-04-upl.**

Project/Site: **Ravalli Co. Airport**
Applicant/Owner: **Ravalli County**
Investigator: **SR/EN**
[X] Do normal circumstances exist on the site?
[ ] Have vegetation, soils, or hydrology been disturbed?
[ ] Is the area a potential problem area?

Date: **October 28, 2004**
County: **Ravalli**
State: **MT**
Community ID: **Upland**
Station ID: **S-18-04**
Plot ID: **2**

Vegetation

Dominant Species	Common Name	% Cover	Indicator
Herbaceous			
Aster spp.	Aster spp.		NI, OBL-UPL
Equisetum laevigatum	Scouring-Rush,Smooth		FACW
Lactuca serriola	Lettuce,Prickly		FACU
Carduus nutans	Musk thistle		No status
Agropyron trachycaulum	Wheatgrass, Slender		FAC

% Species that are OBL, FACW, or FAC (except FAC-):
Cowardin Classification:
Remarks: Less than 50% FAC or wetter

Hydrology

[ ] Recorded Data (describe in remarks)
- [ ] Stream, Lake, or Tide Gage
- [ ] Aerial Photograph
- [ ] Other (describe in remarks)

Field Observations:
- Depth of Surface Water(in.): **0**
- Depth to Free Water in Pit(in.): **>16**
- Depth to Saturated Soils(in.): **>16**

Remarks

Primary Wetland Hydrology Indicators
- [ ] Inundated
- [ ] Saturated in upper 12 inches
- [ ] Water marks
- [ ] Drift lines
- [ ] Sediment deposits
- [ ] Drainage patterns in wetlands

Secondary Hydrology Indicators
- [ ] Oxidized root channels
- [ ] Water-stained leaves
- [ ] Local soil survey data
- [ ] FAC-Neutral test
- [ ] Other (explain in remarks)

Soils

Depth (in.)	Hor.	Matrix Color	Mottle / 2nd Mottle Color	Abundance	Contrast	Texture, Structure, etc.
0-16	A	10YR 3/2				Clay Loam Medium Subangular Blocky

Hydric Soils Indicators
- [ ] Histosol
- [ ] Histic Epipedon
- [ ] Sulfidic Odor
- [ ] Probable Aquatic Moist Regime
- [ ] Reducing Conditions
- [ ] Gleyed or Low-Chroma Colors
- [ ] Concretions
- [ ] High Organic % in Surface Layer
- [ ] Organic Streaking
- [ ] Listed on Local Hydric Soils List
- [ ] Listed on National Hydric Soils List
- [ ] Other (explain in remarks)

Unit Name: **C3s Corvallis silt loam slightly saline**
Drainage Class: **Somewhat poorly drained**
Taxonomy: **Fluvauqentic Haploborolls**
[ ] Field Observations match map

Remarks

Wetland Determination

- [ ] Hydrophytic Vegetation Present
- [ ] Hydric Soils Present
- [ ] Wetland Hydrology Present

[ ] This Data Point is a Wetland

Remarks

APPENDIX B

Ravalli County Airport
Wetland Delineation Report Photographs

Photo 1. View northwest of wetland W-1-03.

Photo 2. View east of upland associated with W-1-03.

Photo 3. View southwest of wetland W-2-03.

Photo 4. View northwest of upland associated with W-2-03.

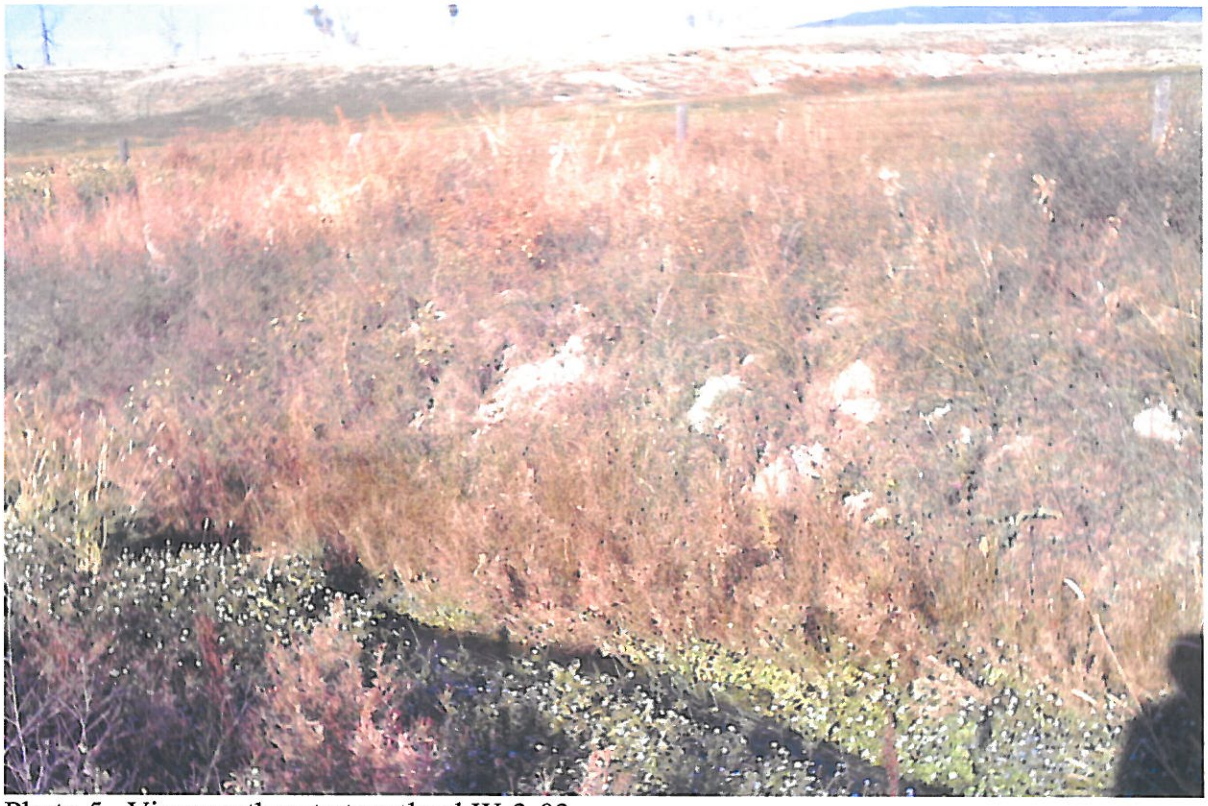


Photo 5. View northeast at wetland W-3-03.

Photo 6. View east of upland area associated with W-3-03.

Photo 7. View east of W-4-03, Gird Creek.

Photo 8. View west of W-4-03 and associated upland vegetation.

Photo 9. View north at W-5-03 and associated upland vegetation.

Photo 10. View south of upland vegetation associated with W-6-03 and W-7-03.

Photo 11. View north of W-9-03 and transition to upland vegetation.

Photo 12. View west of W-10-03, wetland vegetation.

Photo 13. View northeast of upland vegetation associated with W-10-03.

Photo 14. View west of W-11-03, wetland vegetation.

Photo 15. View northeast of upland vegetation associated with W-12-03.

Photo 16. View southeast of upland vegetation associated with W-13-03.

Photo 17. View west of upland vegetation associated with W-14-03.

Photo 18. View north of S-15-04 **1**, wetland data point.

Photo 19. View north of S-15-04 **2**, upland data point.

Photo 20. View west of S-16-04 **1**, wetland data point.

Photo 21. View north of S-16-04 **2**, upland data point.

Photo 22. View north of S-17-04 **1**, wetland data point.

Photo 23. View east of S-17-04 **2**, upland data point.

Photo 24. View west of S-18-04 **1**, wetland data point.

Photo 25. View south of S-18-04 **2**, upland data point.

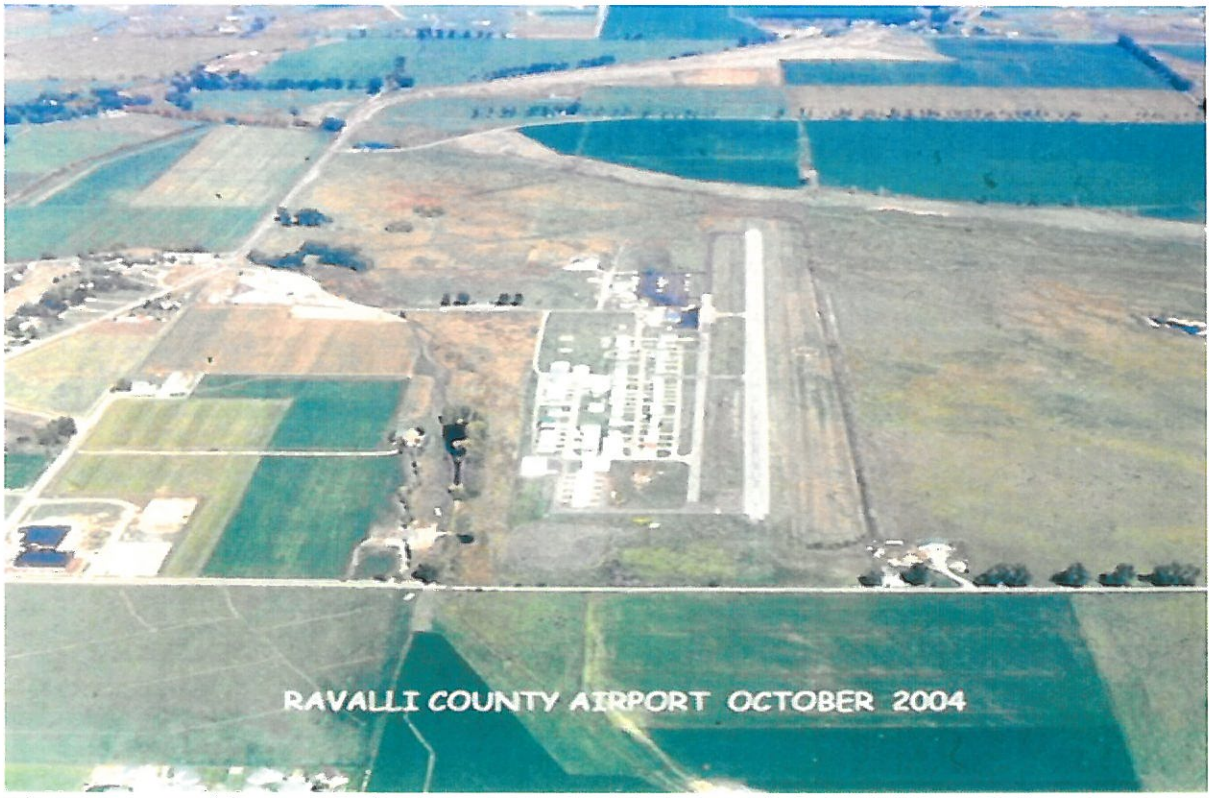


Photo 26. Ravalli County Airport overview of project area.

C1877.008 JB 4,22

U.S. ARMY CORPS OF ENGINEERS
HELENA REGULATORY OFFICE
10 WEST 15TH STREET, SUITE 2200
HELENA, MONTANA 59626

RECEIVED APR 29 2005

REPLY TO
ATTENTION OF:

April 27. 2005

Helena Regulatory Office
Phone (406) 441-1375 Fax (406) 441-1380

RE: **Ravalli County Airport – Jurisdiction Determination**
Corps File No. 200490554

Morrison-Maierle, Inc.
Attn: Mr. Paul McGuire
P.O. Box 1113
Bozeman, Montana 59771

Dear Mr. McGuire:

Reference is made to your request for a verification of wetland boundaries and a jurisdictional determination for the wetlands located within the Ravalli County Airport's proposed expansion area. The airport is located near Hamilton in Sections 20,29, Township 6 North, Range 20 West, Ravalli County, Montana.

Under the authority of Section 404 of the Clean Water Act, Department of the Army permits are required for the discharge of fill material into waters of the United States. Waters of the United States include the area below the ordinary high water mark of stream channels and lakes or ponds connected to the tributary system, and wetlands adjacent to these waters. In certain circumstances, isolated waters and man-made channels may also be considered waters of the United States and would be required to be evaluated on a case-by-case basis.

Based on the information provided and a subsequent field visit conducted on April 18, 2005 by Robert McInerney of our office, the site contained jurisdictional waters of the U.S. under the authority of Section 404 of the Clean Water Act. The enclosed Jurisdictional Determination (JD) form describes the extent of waters of the United States on the project site. This is an Approved Jurisdictional Determination, and it is valid for a period of 5 years from the date of this letter unless new information warrants revision of the determination before the expiration date. If you disagree with this jurisdictional determination, you have the right to appeal the decision. If you would like more information on the jurisdictional appeal process, contact this office.

From a further review of wetlands designated W-6-03, W-7-03, W-9-03, and W-10-03, it has been determined that they are jurisdictional based on being historic channels that meet the wetland criteria.

If you have any questions, please call Robert McInerney of this office at (406) 441-1375, and reference File No. 200490554.

Sincerely,

Allan Steinle
Montana Program Manager

Enclosures

DISTRICT OFFICE: Omaha
FILE NUMBER: 200490554

PROJECT LOCATION INFORMATION:
State: Montana
County: Ravalli
Center coordinates of site (latitude/longitude):
Approximate size of area (parcel) reviewed, including uplands: acres.
Name of nearest waterway: Gird Creek
Name of watershed: Bitterroot

JURISDICTIONAL DETERMINATION
Completed: Desktop determination ☒ Date: 26 April 2005
Site visit(s) ☒ Date(s): 18 April 2005

Jurisdictional Determination (JD):

☐ Preliminary JD - Based on available information, ☐ *there appear to be* (or) ☐ *there appear to be no* "waters of the United States" and/or "navigable waters of the United States" on the project site. A preliminary JD is not appealable (Reference 33 CFR part 331).

☒ Approved JD – An approved JD is an appealable action (Reference 33 CFR part 331).
Check all that apply:

☐ *There are* "navigable waters of the United States" (as defined by 33 CFR part 329 and associated guidance) within the reviewed area. Approximate size of jurisdictional area:

☒ *There are* "waters of the United States" (as defined by 33 CFR part 328 and associated guidance) within the reviewed area. Approximate size of jurisdictional area: 45.97 acres.

☐ *There are "isolated, non-navigable, intra-state* waters or wetlands" within the reviewed area.
☐ Decision supported by SWANCC/Migratory Bird Rule Information Sheet for Determination of No Jurisdiction.

BASIS OF JURISDICTIONAL DETERMINATION:

A. **Waters defined under 33 CFR part 329 as "navigable waters of the United States":**
☐ The presence of waters that are subject to the ebb and flow of the tide and/or are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.

B. **Waters defined under 33 CFR part 328.3(a) as "waters of the United States":**
☐ (1) The presence of waters, which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide.
☐ (2) The presence of interstate waters including interstate wetlands[1].
☐ (3) The presence of other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate commerce including any such waters (check all that apply):
  ☐ (i) which are or could be used by interstate or foreign travelers for recreational or other purposes.
  ☐ (ii) from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
  ☐ (iii) which are or could be used for industrial purposes by industries in interstate commerce.
☐ (4) Impoundments of waters otherwise defined as waters of the US.
☒ (5) The presence of a tributary to a water identified in (1) – (4) above.
☐ (6) The presence of territorial seas.
☒ (7) The presence of wetlands adjacent[2] to other waters of the US, except for those wetlands adjacent to other wetlands.

Rationale for the Basis of Jurisdictional Determination (applies to any boxes checked above). *If the jurisdictional water or wetland is not itself a navigable water of the United States, describe connection(s) to the downstream navigable waters. If B(1) or B(3) is used as the Basis of Jurisdiction, document navigability and/or interstate commerce connection (i.e., discuss site conditions, including why the waterbody is navigable and/or how the destruction of the waterbody could affect interstate or foreign commerce). If B(2, 4, 5 or 6) is used as the Basis of Jurisdiction, document the rationale used to make the determination. If B(7) is used as the Basis of Jurisdiction, document the rationale used to make adjacency determination:* Gird Creek drains into the Bitterroot River which flows to the Clark Fork which in turns flows to Idaho and eventually into the Columbia River, a Section 10 navigable water.

Lateral Extent of Jurisdiction: (Reference: 33 CFR parts 328 and 329)

☐ Ordinary High Water Mark indicated by:
- ☐ clear, natural line impressed on the bank
- ☐ the presence of litter and debris
- ☐ changes in the character of soil
- ☐ destruction of terrestrial vegetation
- ☐ shelving
- ☐ other:

☐ High Tide Line indicated by:
- ☐ oil or scum line along shore objects
- ☐ fine shell or debris deposits (foreshore)
- ☐ physical markings/characteristics
- ☐ tidal gages
- ☐ other:

☐ Mean High Water Mark indicated by:
☐ survey to available datum; ☐ physical markings; ☐ vegetation lines/changes in vegetation types.

☒ Wetland boundaries, as shown on the attached wetland delineation map and/or in a delineation report prepared by: Morrison-Maierle, Inc.

Basis For Not Asserting Jurisdiction:

☐ The reviewed area consists entirely of uplands.
☐ Unable to confirm the presence of waters in 33 CFR part 328(a)(1, 2, or 4-7).
☐ Headquarters declined to approve jurisdiction on the basis of 33 CFR part 328.3(a)(3).
☐ The Corps has made a case-specific determination that the following waters present on the site are not Waters of the United States:
- ☐ Waste treatment systems, including treatment ponds or lagoons, pursuant to 33 CFR part 328.3.
- ☐ Artificially irrigated areas, which would revert to upland if the irrigation ceased.
- ☐ Artificial lakes and ponds created by excavating and/or diking dry land to collect and retain water and which are used exclusively for such purposes as stock watering, irrigation, settling basins, or rice growing.
- ☐ Artificial reflecting or swimming pools or other small ornamental bodies of water created by excavating and/or diking dry land to retain water for primarily aesthetic reasons.
- ☐ Water-filled depressions created in dry land incidental to construction activity and pits excavated in dry land for the purpose of obtaining fill, sand, or gravel unless and until the construction or excavation operation is abandoned and the resulting body of water meets the definition of waters of the United States found at 33 CFR 328.3(a).
- ☐ Isolated, intrastate wetland with no nexus to interstate commerce.
- ☐ Prior converted cropland, as determined by the Natural Resources Conservation Service. Explain rationale:
- ☐ Non-tidal drainage or irrigation ditches excavated on dry land. Explain rationale:
- ☐ Other (explain):

DATA REVIEWED FOR JURSIDICTIONAL DETERMINATION (mark all that apply):

☒ Maps, plans, plots or plat submitted by or on behalf of the applicant.
☐ Data sheets prepared/submitted by or on behalf of the applicant.
- ☒ This office concurs with the delineation report, dated February 2005, prepared by (company): Morrison-Maierle
- ☐ This office does not concur with the delineation report, dated , prepared by (company):

☐ Data sheets prepared by the Corps
☐ Corps' navigable waters' studies:
☐ U.S. Geological Survey Hydrologic Atlas:
☒ U.S. Geological Survey 7.5 Minute Topographic maps:
☐ U.S. Geological Survey 7.5 Minute Historic quadrangles:
☐ U.S. Geological Survey 15 Minute Historic quadrangles:
☐ USDA Natural Resources Conservation Service Soil Survey:
☐ National wetlands inventory maps:
☐ State/Local wetland inventory maps:
☐ FEMA/FIRM maps (Map Name & Date):
☐ 100-year Floodplain Elevation is: (NGVD)
☐ Aerial Photographs (Name & Date):
☐ Other photographs (Date):
☐ Advanced Identification Wetland maps:
☒ Site visit/determination conducted on: April 18, 2005
☐ Applicable/supporting case law:
☐ Other information (please specify):

[1]Wetlands are identified and delineated using the methods and criteria established in the Corps Wetland Delineation Manual (87 Manual) (i.e., occurrence of hydrophytic vegetation, hydric soils and wetland hydrology).

[2]The term "adjacent" means bordering, contiguous, or neighboring. Wetlands separated from other waters of the U.S. by man-made dikes or barriers, natural river berms, beach dunes, and the like are also adjacent.